













**UNIVERSITY OF CALCUTTA**

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**UNIVERSITY QUESTION PAPERS**

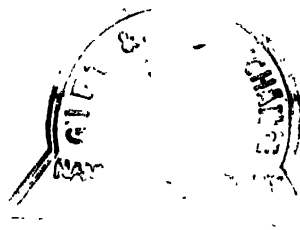
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# UNIVERSITY QUESTION PAPERS

## Matriculation Examination 1933

### ENGLISH

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## TRANSLATION FROM BENGALI INTO ENGLISH

Paper-Settlers—	RAI BARADUR KHAJENDRANATH MITRA, M.A.
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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following passages :—

(a) রাজপুত যুবক রুদ্ধ কণ্ঠে বলিল, “সত্ৰাট, এই ছুরি দিয়া 20  
আপনার এই পরম শত্রুর প্রাণনাশ করুন। আমি আজ এই ছুরি দিয়া  
আপনার প্রাণবধ করিতে আসিয়াছিলাম; কিন্তু স্বচক্ষে দেখিলাম, জীবন  
গ্রহণ করা অপেক্ষা জীবন দান করা মহত্তর।” বাবর রাজপুত যুবককে  
স্বহস্তে রাজপুত হইতে উঠাইলেন। তিনি সম্মুখে বলিতে লাগিলেন;  
“বাস্তবিক ভাই। জীবন লওয়ার চেয়ে জীবন দান করা মহত্তর। আমি  
কিন্তু তোমার জীবন গ্রহণ করিলাম। অতাবধি তুমি আমার নিকট  
ধাকিবে। আমি তোমাকে আমার শরীর-রক্ষক সেনাদলে নিযুক্ত  
করিলাম।” যুবকের মন কৃতজ্ঞতায় পূর্ণ হইল এবং সে প্রতিহিংসার কথা

একেবাবে ভুলিয়া গেল। সেই দিন হইতে রাজপুত যুবক বাবরের শরীর-রক্ষকের পদে নিযুক্ত হইল। বাবর কতবার এই বীর যুবকের বীরত্ব দেখিয়া চমৎকৃত হইয়াছেন; এই দরিদ্র সৈনিক কতবার যুদ্ধক্ষেত্রে বাদসাহের জীবন রক্ষা করিয়াছে। যে এক দিন প্রাণ লইবে বলিয়া অহর্নিশি সুর্যোগ খুঁজিয়া বেড়াইত, সে এখন সেই প্রাণরক্ষা করিবার জগ্ন নিজে প্রাণ দিতে কুণ্ঠিত হইত না।

(৬) এম্.এ. পাশ করিয়াই আশুতোষ বি.এ. পরীক্ষাতে গণিতের ২০ পরীক্ষক নিযুক্ত হইবার জগ্ন দরখাস্ত করিলেন। কিন্তু নানা কারণে বিশ্ববিদ্যালয় তাঁহার সে দরখাস্ত নামঞ্জুর করিয়া দিলেন। আশুতোষ ছাড়িবার পাত্র নহেন; তিনি যাহা ধরিতেন, তাহার শেষ পর্য্যন্ত না দেখিয়া কিছুতেই প্রতিনিবৃত্ত হইতেন না। পরবৎসর প্রেমচাঁদ রায়চাঁদ ইন্ডেন্টশিপ পাইয়াই একেবারে এম্.এ. পরীক্ষাতে গণিতের পরীক্ষক নিযুক্ত হইবার জগ্ন আবেদন করিলেন। এবারে বিশ্ববিদ্যালয় তাঁহাকে পরীক্ষক নিযুক্ত করিলেন। এ বিষয়ে তাঁহার প্রধান সহায় ছিলেন গুরুদাস বন্দ্যোপাধ্যায়, মহেন্দ্রলাল সরকার এবং গণিতাধ্যাপক বৃথ সাহেব। আশুতোষই ভাবতবাসীর মধ্যে গণিতের মত্ত কঠিন বিষয়ে ভারতীয় বিশ্ববিদ্যালয়ে এম্.এ. পরীক্ষায় প্রথম পরীক্ষক নিযুক্ত হইলেন। তাঁহার সহযোগী হইলেন অধ্যাপক বৃথ। তখন বৃথ সাহেব প্রায়ই ভবানীপুরে আশুতোষের বাটীতে গমন করিতেন, এবং সেখানে গুরু-শিষ্যে গণিতের চর্চা হইত।

(৭) আলফ্রেড নোবেল উইল্ করিয়া যান যে, তাঁহার সম্পত্তির ২০ আয় হইতে প্রতিবৎসর পাঁচটি বিষয়ের জগ্ন পাঁচটি পুরস্কার দেওয়া হইবে। সে পাঁচটি বিষয় এই—সাহিত্য, রসায়ন, পদার্থবিজ্ঞান, চিকিৎসাশাস্ত্র এবং জগতে শান্তি-স্থাপনের চেষ্টা। এই পাঁচটি বিষয়ে যাহারা সর্বাপেক্ষা ভাল কাজ করিয়াছেন, এ রকম পাঁচ জন লোক প্রত্যেকে এক লক্ষ বিশ হাজার টাকা প্রতিবৎসর পুরস্কার পাইবেন। ১৮৯৬ সালে ৬৩ বৎসর বয়সে আলফ্রেড নোবেলের মৃত্যু হয়। নোবেলের পুরস্কার দেওয়া আরম্ভ হয় ১৯০১ সাল হইতে। গতদিন পর্য্যন্ত ইয়ুরোপের লোকেরাই এই পুরস্কার পাইয়া আসিতেছিলেন। ভারতবর্ষের মধ্যে, শুধু ভারতবর্ষ কেন, সমস্ত এশিয়ার মধ্যে আমাদের রবীন্দ্রনাথই ১৯১৩ সালে সর্বপ্রথম এই পুরস্কার লাভ করেন। কিন্তু নোবেল পুরস্কারের এক লক্ষ বিশ হাজার টাকা নিজে না গ্রহণ করিয়া সমস্তই তিনি তাঁহার বোলপুর স্কুলে দান করিয়াছিলেন। গত বৎসর আর একজন ভারতবাসী এই গৌরবজনক পুরস্কার পাইয়াছেন। তিনি কলিকাতা বিশ্ববিদ্যালয়ের পদার্থ-বিজ্ঞানের অধ্যাপক, সার চন্দ্রশেখর রায়ন্।

## TRANSLATION FROM HINDI INTO ENGLISH

*Paper-Sellers*—{ LALA SITARAM, B.A.  
PROF. S. K. CHATTERJI, M.A., D.LIT

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Translate any two of the following extracts into English :—*

(a) देश की उन्नति और सुधार के लिये सब प्रकार की पोथियों में से 20  
इतिहास से बढ़कर अच्छी और ज़रूरी दूसरी पोथी नहीं हैं। इसको पढ़कर  
लोग यह जान सकते हैं कि किस जाति की उन्नति क्या क्या करने से हुई है  
और किन किन बुराइयों के आ जाने से देश की अवस्था बुरी हो गई है।  
इन बातों को जानकर देश का भला चाहनेवाले और उसके लिये उद्योग  
करनेवाले यदि किसी बुराई के बीज को जमता देखें तो वे उसके आगे  
चलकर बड़ी भारी बुराई और हानि का ध्यान करके उसके नाश करने का  
उपाय सोच सकते हैं और बहुत से दूसरे उपायों से अपने देश को भलाई  
पहुँचा के उसका उद्धार कर सकते हैं। इन्हीं कारणों से इतिहास की  
पोथियाँ बड़ी आवश्यक हैं। परन्तु बड़े खेद की बात है कि हमारे देश में  
इतिहास का पूरा अभाव है। नाम लेने को राजतरंगिणी एक इतिहास की  
पुरानी पुस्तक मिलती है।

(b) बोलचाल की भाषा के बारे में कुछ लिखना टेढ़ी खीर है। जितने 20  
मुँह उतनी बात सुनी जाती है। यदि यह बात सत्य न हो तो भी इसमें  
सन्देह नहीं कि इस विषय में एक मत नहीं है। बोलचाल की भाषा की  
परिभाषा भिन्न भिन्न हैं। अथवा यों कहिये कि इस विषय में मान्य लोगों  
के सिद्धान्त एक से नहीं हैं। बोलचाल की भाषा से वह भाषा अभिप्रेत  
है जो बोली जाती है, अथवा जिसे सर्वसाधारण बोलते हैं। यदि इस  
कसौटी पर कसें तो वर्तमान हिन्दी गद्य पद्य की अधिकांश रचना ऐसी भाषा  
में की गई मिलेगी जिसे बोलचाल की भाषा नहीं कह सकते; उर्दू के  
विषय में भी यही कहा जा सकता है। यह विचार आधुनिक नहीं  
चिरकाल से चला आता है। जिस समय हिन्दी और उर्दू का नामकरण  
हुआ और इन दोनों ने लिखित गद्य भाषा का रूप धारण किया उसके कुछ  
समय उपरान्त ही इस विचार का भी सूत्रपात हुआ।

(c) विद्यार्थी कविता की ओर सबसे अधिक झुके हैं। साहित्य के और किसी अंग की ओर इतने नहीं लगे हुए हैं, जितने कविता की ओर। प्रत्येक शिक्षासंस्था में इनकी संख्या बहुत है। इसके कई कारण हैं। एक तो अन्य विषयों की अपेक्षा इसमें शिक्षा की कम आवश्यकता है। एक छोटी सातवीं कक्षा तक का विद्यार्थी कविता गढ़ सकता है। दूसरे इसमें समय तथा परिश्रम अधिक नहीं लगाना पड़ता। तीसरे आजकल छायावादी (mystic) कविताओं का प्रचार अधिक हो जाने के कारण उसकी आड़ में तुकबंदी करने में बड़ी सरलता हो जाती है। इनके अतिरिक्त इस संख्यावृद्धि का एक कारण और भी है। युवक स्वभावतः अपने हृदय के भावों को प्रदर्शित करने के लिए उत्सुक रहते हैं और भावों के प्रदर्शन का कविता से बढ़कर दूसरा माधन नहीं।

TRANSLATION FROM ASSAMESE INTO ENGLISH

Paper-Sellers—{SRIJUT SURYAKUMAR BHUIYAN, M.A.  
MR. AMBIKANATH BORAH, M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

Translate two of the following passages into English :—

20 × 2 = 40

(a) গজনি দেশৰ চুলটান মাহমুদে তেওঁৰ সভাৰ আনবিলাক মানুহতকৈ আয়াজক বৰ ভাল পাইছিল। এই কাৰণে অল্ল সভাসদবিলাকে পবিত্ৰীকাতৰ হৈ আয়াজক নষ্ট কৰিবৰ কাৰণে তেওঁৰ দোষ বিচাৰিব ধৰিলে। এই হিংসক মানুহবিলাকে বজাক জনালে যে আয়াজে নিতৌ বাজ-ভৰাঁললৈ যায় আৰু তাৰ পৰা কিবা-কিবি বস্তু চুৰ কৰিআনে, আৰু তেওঁবিলাকে কলে যে আয়াজে বাজ-ভৰাঁললৈ যোৱাৰ একো সন্ধান নাই, এতেকে চুৰি কৰাৰ বাজে তেওঁৰ কি অভিপ্ৰায় হব পাৰে? তাকে শুনি চুলটানে কলে যে যি পৰ্য্যন্ত তেওঁ নিজ চকুৰে নেদেখে সেই পৰ্য্যন্ত তেওঁ সেই কথা বিশ্বাস কৰিব নোৱাৰে। চুলটানে এদিন ভৰালৰ বেবৰ ফুটাইনি জুমি চাই দেখিলে যে আয়াজে ভৰালৰ চন্দুক এটা মেলি কিছুমান পুৰণা কাপোৰ পিন্ধিছে। চুলটানে দুৱাৰ মেলি আয়াজৰ ওচৰলৈ গৈ হঠাৎ কাৰণ সোধাত আয়াজে মাত লগালে,—“হে চুলটান, আপোনাৰ অনুগ্ৰহত মই ডাক্তৰ পদবী পোৱাৰ আগেয়ে মই তই কাপোৰ ব্যৱহাৰ কৰিছিলোঁ। আপোনাৰ দয়া-শুণৰ মই কিমান ধন্য আৰু আগেয়ে মই ১কমান দুখীয়া আছিলোঁ তাকে মনত পেলাবৰ নিমিত্তে মই কেতিয়াবা

কেতিয়াবা মোৰ দুখীয়া অৱস্থাৰ কাপোৰ শিকি চাওঁ।” চুলটান মাহমুদে তই কথা শুনি বৰ বং পালে, আৰু আত্মজক আগতকৈ ওখ পদবীলৈ তুলি দিলে।

(b) কমলপুৰ নামে দেশত বঘুনাথ নামেৰে এজন ভদ্ৰ মানুহ আছিল। তেওঁ ব্যৱসায় কৰি খাইছিল। তেওঁৰ সত্যবান নামেৰে এটি লৰা আছিল। সেই লৰাক সৰুৰে পৰা বৰ যত্নেৰে সৈতে পিতৃ-মাতৃয়ে শিক্ষা দিয়াত লৰাৰ স্বভাব বৰ শান্ত আৰু বিনয়ী হৈছিল। লাহে লাহে লৰাটোক বিয়া কৰাই দিবৰ সময় হল। ধৰ্মপাল নামেৰে এজন মানুহৰ সুধম্মা নামেৰে এজনী ছোৱালীক সত্যবানলৈ বিয়া কৰাবৰ ঠিক কৰিলে। শুভ দিনত সত্যবানে বিয়া কৰাই ভাৰ্য্যাক ঘৰলৈ আনিলে। বঘুনাথ কিছু দিনৰ নুৰত লোকান্তৰ হল। পিতাকৰ মৃত্যুৰ পাচত সত্যবানে বেপাৰ চলাবলৈ ধৰিলে। সত্যবান আৰু সুধম্মাৰ বৰ মৰম-প্ৰীতি আছিল, তেওঁলোকৰ স্বভাৱ বৰ পৰিত্ৰ আছিল। ঈশ্বৰলৈ তেওঁলোকে বৰ ভয় কৰিছিল। তেওঁলোকে বৰ ভক্তিৰে অতিথি সৎকাৰ কৰিছিল। ভাল কাম কৰিবলৈ তেওঁলোকৰ বৰ মন আছিল। গাৱঁৰ মানুহৰ উপকাৰৰ নিমিত্তে সত্যবানে এখন পঢ়াশালা পাতি দিছিল। তাত লৰাবিলাকে বিনামাছুলে পঢ়িছিল।

(c) চক্ৰধ্বজ সিংহ স্বৰ্গদেৱৰ দিনত দিল্লীৰ পাঁদশ্বাহে আমাৰ দেশ লবলৈ সৈন্ত পঠিয়াইছিল। এই সৈন্তৰ ওপৰত বৰসেনাপতি আছিল ৰাজা ৰামসিংহ। এওঁ ৰাজপুত আছিল আৰু ভাৰতবৰ্ষৰ ভিতৰত এজন নামজলা বীৰপুৰুষ আছিল। তেতিয়া লাচিত গুৱাহাটীত বৰফুকন আছিল, আৰু তেওঁ অসমীয়া সেনাৰ ওপৰত বৰসেনাপতি আছিল। অসমীয়া আৰু মোগল সেনাৰ ভিতৰত বৰ ডাঙ্গৰ যুদ্ধ লাগে। সেই যুদ্ধ গুৱাহাটীত ওচৰত থকা শৰাইঘাটতে বাইকৈ হয়। আমাৰ দেশত বুৰঞ্জী বুলি এবিধ পুথি আছে। তাত আগৰ দিনৰ পুৰণি কথাবিলাক লিখা আছে। তোমালোকে ডাঙ্গৰ হলে, বুৰঞ্জীত শৰাইঘাটৰ যুদ্ধৰ কথা পঢ়িবলৈ পাবা। এই যুদ্ধত আমাৰ বৰসেনাপতি লাচিত ফুকনে এনে বৃদ্ধি আৰু সাহেৰে আমাৰ সেনা চলাইছিল যে তাক দেখি ৰামসিংহই কবলৈ বাস্তৱ হৈছিল,—  
“ধনু ধনু অসমীয়াসেনা, ধনু ধনু অসমীয়া সেনাপতি।” অসমীয়াসৈন্যে সকলো কামতে পাৰ্গত সেনা ৰামসিংহই ক’তো দেখা নাছিল। আন দেশৰ সেনাই যেই-দেই এটা কামতহে মাথোন পটু; কিন্তু প্ৰতিজন অসমীয়া সেনাই বৰটোপ চলাব পাৰে, হিলৈ মাৰিব পাৰে, গঁড় বান্ধিব পাৰে, নাও চলাব পাৰে।

## TRANSLATION FROM URDU INTO ENGLISH

*Paper-Setters*—{KHAN BAHADUR REZA ALI WAHSHAT  
MAULVI SHAH KALIMUR RAHMAN, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following extracts :—

A

20

بعض ملکوں میں کان کھود کر ایک قسم کا کوئلہ نکالا جاتا ہے جو پتھر کا کوئلہ مشہور - نہایت عمدہ قسم کا کوئلہ انگلستان کا ہوتا ہے - انگلستان کے لئے اس کوئلے کی کان گویا دولت کی کان ہے - تمام دکانی کلون کے کارخانے اور دکانی کشتیاں اسی کے وسیلے سے جاری ہیں - اور چونکہ وہ سرد خطہ ہے اسلئے کھانا پکانے اور مکان کو گرم رکھنے کے لئے بھی یہ کوئلہ کلم دیتا ہے - کوئلے کی کان کھودنے کو بڑی عقل و حکمت دیکھا ہے - کلون کے وسیلے سے کھودا اور نکالا جاتا ہے - اول ایک گہرا غار کوئلے کے مخزن تک کھودتے ہیں - پھر وہاں کا پانی کل کے وسیلے سے نکالکر باہر پھینک دیتے ہیں - اسکے بعد کوئلہ کھدنا شروع ہوتا ہے - کان کے اندرونی رستے نہایت تاریک ہوتے ہیں - اسلئے کام کرنے کے مقامات پر جابجا روشنی کا اہتمام رکھتے ہیں \*

B

20

جب جارج چودہ برس کا ہوا تو اپنا آبائی پیشہ اختیار کیا یعنی کان کے اندر کوئلہ کھودنے لگا جسکی مزدوری آٹھ آنے روز تھی - شراب خوری اور کھیل تماشوں سے اسے سخت نفرت تھی - ابھی تک وہ محض ناخواندہ تھا مگر علم و فن کا ایسا شائق کہ اپنے گھر سے چار میل کے فاصلے پر ایک استاد کے پاس حساب سیکھنے جایا کرتا - بیس سال کی عمر تک اسنے علم حساب میں اچھی لیاقت پیدا کر لی - اس اثنا میں وہ اپنے

کام میں بھی ترقی کرتا رہا اور زیادہ مزدوری پانے لگا۔ شادی بھی کر لی۔ اس زمانے میں کتابوں کی قیمت گران تھی۔ اتنا پس انداز نہ ہوتا کہ پڑھنے کے لئے کتابیں خرید سکے (سلئے موجی اور درزی کا پیشہ کرنے لگا۔ جوتیان بھی بناتا اور کٹ بھی سیٹا۔ ان دو پیشوں کی آمدنی سے گھر کا کام چلاتا اور جو بچتا اُسکے کتابیں خرید لیتا \* )

C

20

جیپال نے لاہور پہنچ کر وعدوں کے پورا کرنے سے انکار کیا اور سبکدگی کے آدمیوں کو قید کر لیا۔ سبکدگیوں کو جب یہ خبر پہنچی تو یقین نہ آیا۔ آخر جب بہ تحقیق معلوم ہوا تو بہت جھنجھلایا اور فوج لیکر آندر کا رخ کیا۔ جیپال نے بھی تیاری کی۔ تمام ہندوستان کے راجاؤں کو چٹھیاں لکھیں۔ وہ بھی جانتے تھے کہ پنجاب ہمارے ملک کا پھاٹک ہے وہ تو تا تو خیر نہیں۔ سب نے فوجیں بھیجیں۔ خزانوں اور سامانوں کا تار باندھ دیا۔ اس طرح ہندوؤں کی بے شمار جمعیت ہو گئی۔ جیپال انہیں لیکر سبکدگیوں کے مقابلے کے لئے روانہ ہوا۔ جب دونوں لشکر آمنے سامنے ہوئے جنگ کا میدان گرم ہوا۔ دونوں طرف کے بہادر نام کے لئے جانیں دینے لگے۔ ہندوؤں کی فوج صبح سے برابر کمر باندھ لڑ رہی تھی۔ شام کو انکی جمعیت میں گہراہت معلوم ہوئی \*

TRANSLATION FROM ORIYA INTO ENGLISH

*Paper-Setters*—{MR. MADHUSUDHAN DAS, B.A.  
MR. MAHESWAR DAS, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate any two of the following into English :—

(a) ସୁସୀମଙ୍କ ସଙ୍ଗରେ ଅଶୋକଙ୍କର ବୈଦିହ୍ୟ ଥିବାରୁ 20  
ବିନ୍ଦୁସାର ଉଭୟଙ୍କୁ ପୃଥକ ରଖିବା ଅଶୟରେ ଅଶୋକଙ୍କୁ ରାଜ୍ୟର  
ବାୟବ୍ୟ ପ୍ରାନ୍ତସ୍ଥିତ ତକ୍ଷଶିଳା ନଗରରେ ଘଟି ଥିବା ବିଦ୍ରୋହ ଦମନ  
କରିବା ନିମିତ୍ତ ସେଠାକୁ ପ୍ରେରଣ କଲେ । ଅଶୋକ ଅଳ୍ପକାଳ ମଧ୍ୟରେ  
ସୁକୌଶଲରେ ବିଦ୍ରୋହ ଦମନ କରି ପିତାଙ୍କର ଏକ ପ୍ରଧାନ ମନ୍ତ୍ରୀଙ୍କର  
ଅନୁରାଗ ଅର୍ଜନ କଲେ । ଇତିମଧ୍ୟରେ ସୁସୀମ ରାଜଧାନୀ  
ପାଟଲୀପୁତ୍ର ନଗରରେ ନାନା ପ୍ରକାର ଉପଦେଶ କରନ୍ତେ ବିନ୍ଦୁସାର  
ପ୍ରଧାନ ଅମାତ୍ୟଙ୍କ ପରାମର୍ଶ ଅନୁସାରେ ତାହାଙ୍କୁ ତକ୍ଷଶିଳାର ଶାସନ  
ନିମିତ୍ତ ସେଠାକୁ ପ୍ରେରଣ କଲେ ଏବଂ ଅଶୋକଙ୍କୁ ରାଜଧାନୀକୁ  
ଅଣାଇଲେ । ବିଷ୍ଣୁହାଲପରେ ସୁସୀମଙ୍କର ଅନୁପସ୍ଥିତି ସମୟରେ ବିନ୍ଦୁ-  
ସାରଙ୍କର ଚରମକାଳ ଉପସ୍ଥିତ ହେଲା । ସୁସୀମଙ୍କ ପ୍ରତ୍ୟାବର୍ତ୍ତନ ପର୍ଯ୍ୟନ୍ତ  
ଅଶୋକଙ୍କ ହସ୍ତରେ ରାଜ୍ୟର ଅର୍ପଣ କରି ପରଲୋକ ଗମନ  
କଲେ । ସୁସୀମ ଅବିଳମ୍ବେ ତକ୍ଷଶିଳାକୁ ସଫେଦ୍ୟରେ ପ୍ରତ୍ୟାବର୍ତ୍ତନ



କବି ରାଜ୍ୟାଧିକାର ନିମିତ୍ତ ରାଜଧାନୀ ଆନୁମୋଦିତ କଲେ । କିନ୍ତୁ ଅଶୋକ ତାହାଙ୍କ ପ୍ରଗଣା ମନ୍ତ୍ରୀ ରାଧାଗୁପ୍ତଙ୍କର ସାହାଯ୍ୟରେ ସୁସୀମାକୁ ପରାସ୍ତ ଏବଂ ନିହତ କଲେ । ଭକ୍ତ ଅବଦାନ ଗ୍ରନ୍ଥରେ ଲିଖିତ ଅଛି ଯେ ଅଶୋକ ଆପଣାର ରାଜତ୍ବକୁ ଅସମ୍ଭବ ଓ ନିଷ୍ଫଳ କରାଇ ଉଦ୍ଦେଶ୍ୟରେ ରାଜ୍ୟଲଘ୍ବ ସମସ୍ତ ରାଜବଂଶୀୟମାନଙ୍କ ବଧ କରିଥିଲେ ।

(b) ଅନ୍ଧକାରର ଏକପ୍ରକାର ସୌନ୍ଦର୍ଯ୍ୟ ଅଛି ଯାହା ଭାବୁକ ଏବଂ 20

ଚନ୍ଦ୍ରାଶୀଳ ବ୍ୟକ୍ତିମାନଙ୍କୁ ଉତ୍ପଳିତ କରି ପାରିବେ । ଅନ୍ଧକାରକୁ ମୁଁ ବାସ୍ତବିକ ସ୍ବରୂପ ପାଏଁ; କାହାକୁ, ତାହା ମୁଁ ଜାଣେ ନାହିଁ । ଅନ୍ଧକାର ହୋଇଥିବା ବସ୍ତୁଗୁଡ଼ିକ ମନେ ହୁଏ, ସ୍ବପ୍ନର ଛାୟା ଯଦିଓ ଆଉ ଭୋଗକୁ ହେବ ନାହିଁ ପରା ? ଅନ୍ଧକାରରେ ମୁଁ ନିଜକୁ ପ୍ରକୃତ ଭାବରେ ଗଢ଼ି ପାରୁଁ ଏବଂ ଭବିଷ୍ୟତର ପଥ କିଛି କିଛି ଦେଖେ । ମୋହର ମନେ ହୁଏ, ଏ ବିଶ୍ବରେ ଯାହାର କେହି ନାହାନ୍ତି ଅନ୍ଧକାରକୁ ତାହାର ଏକମାତ୍ର ଅନ୍ତର । ହୃଦୟର ବ୍ୟାକୁଳତାରେ ଅନ୍ଧକାରରେ ବୁଡ଼ି ଗଲେ ପୃଥିବୀର ଦୁଃଖ, କଷ୍ଟ, ଅଭାବ ଆଉ କିଛି ସ୍ବରୂପ ହୁଏ ନାହିଁ । ଅନ୍ଧକାରର ଅନ୍ତରାଳ କେତେ କାବ୍ୟର ଉତ୍ପତ୍ତି ସାଧନ କରିଅଛି, କେତେ ଅକବିଙ୍କୁ କବି କରିଅଛି ! ଏହି ସୌନ୍ଦର୍ଯ୍ୟର ଶିଖର ଶିଖର ଅଭାବ ପାଇଁ କେତେ ପ୍ରାଣ ସ୍ବପ୍ନରେ ଭୋଗସ୍ବରୂପ ମାୟା ବିସର୍ଜନ କରିଅଛି । ଅନ୍ଧକାରର ମର୍ଯ୍ୟାଦା ଯେ ବୁଝି ଅଛନ୍ତି, ସେ ନିଷ୍ଠୁର କହିବେ, ସ୍ବପ୍ନର ଅନିବାର୍ଯ୍ୟ ମଧ୍ୟରେ ଦୃଷ୍ଟି ନାହିଁ । ଅନ୍ଧକାରରେ ବସି କେତେ ନିରାଶ ହୃଦୟ ନୂତନ ପ୍ରତିଜ୍ଞାର ବଳ ଲାଭ କରିଅଛି, ତାହାର ସ୍ବରୂପ କେ କହିବ ?

(c) ଉପେନ୍ଦ୍ରଭଞ୍ଜ ସ୍ମୃତି ଦେଉଳ ବା କୁକଦ ଦେଉଳ ତାଙ୍କର ଲେଖନୀ ସାଥୀକ ହୋଇଥିଲା—ତାଙ୍କ ଦେଉଳରୁ ଆଜି ଅନେକ କୃତନିଦ୍ୟା ବ୍ୟକ୍ତିଙ୍କର ନିଦ୍ରାଭଙ୍ଗ ହୋଇଅଛି । ଗୁଜସୁଖ ଭୁକ୍ତି କରି ବାଗ୍ମେଶଙ୍କ ଚରଣ ସେବାରେ ଜୀବନଉତ୍ସର୍ଗ କରି ସେ ଯେଉଁ ସାଧୁ ଦୃଷ୍ଟାନ୍ତ ଦେଖାଇ ଯାଇଅଛନ୍ତି ତାହା ଆଜି ସ୍ମୃତି ପାଶ୍ଚାତ୍ୟ ଜ୍ଞାନ—ସମନ୍ୱିତ ଉତ୍କଳାୟୁ ଶିକ୍ଷିତମଣ୍ଡଳୀର ଅନୁକରଣୀୟ । ଉତ୍କଳ ସାହିତ୍ୟକ୍ଷେତ୍ରରେ ଭଞ୍ଜକବିଙ୍କୁ ଘେନି ଉତ୍କଳ ଆନ୍ଦୋଳନ ଉପସ୍ଥିତ । ଆର୍ଯ୍ୟମାନଙ୍କର ନିଶ୍ୱାସ ଯେ ଏହା ଗୋଟିଏ ନବ ଯୁଗର ଆରମ୍ଭ । ପ୍ରାଚୀନ ପ୍ରଣାଳୀ ପରିବର୍ତ୍ତିତ ହୋଇ ଧୀରେ ଧୀରେ ନୂତନ ପ୍ରଣାଳୀ ପ୍ରଚ୍ଛେଦିତ ହୋଇ ଆସୁଅଛି । କାବ୍ୟ ସାହିତ୍ୟର ଗୋଟିଏ ପ୍ରଧାନ ନିରାଶ—ସୁତରାଂ ତାହାର ସମ୍ୟକ୍ ଆଲୋଚନା ଏକାନ୍ତ ବାଞ୍ଛନୀୟ । କିନ୍ତୁ ବାଦ—ପ୍ରତିବାଦ ଭଦ୍ରତା ଓ ସ୍ୱରୂପର ସୀମା ଲଘନ କରି ବ୍ୟକ୍ତି ଗତ ଅନୁମୋଦରେ ପରିଣତ ହେଲେ, ସେଥିରୁ ସ୍ପଷ୍ଟତର ଆଶା ଅନେକ ପରିମାଣରେ ଲଭେହୁଏ । ସ୍ୱାଧୀନତାରେ ମତ ବ୍ୟକ୍ତି କରିବାର ଅଧିକାର ସମସ୍ତଙ୍କର ଅଛି, ସେ ମତ ଗ୍ରହଣ ବା ପରିତ୍ୟାଗ କରିବାର ଅଧିକାର ସାଧାରଣର ଅଛି ।

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## TRANSLATION FROM MAITHILI INTO ENGLISH

Paper-Setters—{MR. GANGAPATI SINGH, B.A.  
PANDIT BABUA MISRA

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate any two of the following passages into English :—

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(a) शङ्करदत्तज्ञा, पहलमान क जन्म भागलपुर जिलान्तर्गत कवखण्ड प्रगञ्जा क गड़ोल नामक ग्राम में भेल छलन्हि । ई मैथिल ब्राह्मण छलाह । हिनक पिता अत्यन्त दरिद्र रहथीन्हि । १६ भ वर्ष क अवस्था में दरभंगा जिला क बंगरहट्टा नाम क ग्राम में बाबू राधाकृष्ण सिंह, जमींदार क ओहि ठाम दुइ टाका मासिक बेतन पर प्यादा पद पर नियुक्त भेलाइ । मल्ल-विद्या अर्थात् पहलमानी हिनका अधिक प्रिय छलन्हि । कार्य सँ अवशिष्ट समय कें ओ एकरहि अभ्यास में बितावयि । कतहु जाथि, कोनों कार्य करथि सतत हिनका कुस्तीअहिक ध्यान लागल रहैत छलन्हि । बंगरहट्टा में क्यो एहि कला क विशेष ज्ञाता नहि रहथि । तीन वर्ष धरि ओ बंगरहट्टा में रहि ओ समीपस्थ नरहनि ग्राम में अगलाह । ओहि ठाम हुनक बहुत मान होमय लगलन्हि । बहुत दिन क बाद ई नेपाल क महाराज सर जंग बहादुर क दरबार में गेलाह । ओतय एक बाघ कें अपन बल सँ सम्मुख समर में पछाड़लन्हि जाहि पर खुशी भय नेपाल सरकार सँ कई हजार विगाहा जमीन वृत्ता ( जागीर ) रूप में भेटलन्हि ।

(b) राजा सिकन्दर शाह माता क परम भक्त छलाह । हुनक माय ओलिम्पिया नीक स्वभाव क नहि छलीहि । परन्तु किछु रहथु, छलीहि तँ सिकन्दर क माय हुनक परम पूज्ये । ताहि हेतुक सिकन्दर कहियो एहन कार्य नहि करैत छलाह जाहि सँ हुनका माय कें कोना कष्ट पहुँचलन्हि ओलिम्पिया क कारणे अन्त में सिकन्दर कें पिता सँ विरोध करय पड़लन्हि । बहुत लोक क तँ ई अनुमान छन्हि जे ओलिम्पिया ततेक उत्तेजना सिकन्दर कें देखथीन्ह जे सिकन्दरहि क षड़यन्त्र क द्वारा फिलिप क मृत्यु भेलन्हि । एही प्रकारक एक कथा भारत वर्ष क यमदग्नि मुनि क विषय में सुनल जाइत अछि । हुनक पुत्र परशुराम अपन पिता क आज्ञा सँ अपन माय कें मारि देने रहथीन्ह ।

(c) एक दिन एक व्याधा शिकार खेल्यबाक हेतु एक वन में गेल । ओ क्रमशः घोर जङ्गल क भीतर प्रवेश कयलक । अत्यन्त घेष्टा कयलहुँ सँ ओकरा एको गोठ चढ़ई नहि भेटलैक । अन्त में

સન્ધ્યા સમીપ જાનિ કય ઓ વન સં ધૂમય લાગલ। કિન્તુ પહી બીચ મેં વડ જોર વર્ષા ઓ બિહાડિ આબિ ગેલેક। વ્યાધા એક વૃક્ષ ક નીચાં વિશ્રામ કરય લાગલ। ઓહિ બિહાડિ મેં કતેક વિશાલ વૃક્ષ સમ ઉલડિ તથા ટટિ કય ખસિ પડલેક। ઓહિ મેં વહુત પશુ પક્ષી મરિ ગેલેક। બિહાડિ તથા વૃષ્ટિ નિવૃત્ત મેલા પર ઓ વ્યાધા રાતિ ચિતયવાલય એક દોસર આશ્રય સ્થાન તાકય લાગલ। અન્ત મેં એક વડ ક ગાઢ ક નીચાં નિરાશ મય બેસિગેલ। ઓહિ વૃક્ષ પર એક ગોટ પરવા ક ચોતા છેલેક। પરવા વ્યાધા કેં અતિથિ જાનિ અતિથિ-સત્કાર ક નિમિત્ત અપન હોલ સં સુખાણ પાત સમ એકઠા કય ઓ કતહુ સં આગિ આનિ કય ઓકરા પ્રજ્વલિત કયલક। વ્યાધા આગિ તાપિ ઓ કિહુ વિશ્રામ પાવિ ક્ષુધા અનુભવ કય પરવા સં કહલકેક। આન કોનોં ભોજન ક વસ્તુ ઉપલબ્ધ નહિં જાનિ સ્વયં અગ્નિ મેં પ્રવેશ કયલક। ઈં દેલિ વ્યાધા ક આંચિ ખૂંજિ ગેલેક ઓ ઓહિ દિન સં વ્યાધ-વૃત્તિ છોડિ દેલક।

TRANSLATION FROM GUJARATI INTO ENGLISH

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PANDIT HARAGOBIND DAS SETH.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

Translate into English any two of the following :—

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(a) એક બાહોશ ઈટાલીઅન હુઠારો ધર ફાડવાના હુત્રર માટે યુરોપની તવારીખમાં પોતાનું નામ અમર કરી ગદો છે. તે એક આબરુદાર ખાનદાનનો નબીરો હતો. તેનો બાપ એક બાહોશ ધારા શાસ્ત્રી હતો, અને તેની મા એક મશહુર ગાનારી હતી. તેમનો આનામીયો દીકરો બેકે મોટી દોલતનો વારસ થનાર હતો, પણ તેના માબાપની બે પરવાઈ અને બે દરકારી ને લીધે, તેઓ પોતાનાં આ એક પુરાં ફરજન્દ ને ઉછેરવા અને તેનાં બચિવાને બેઈએ તેની રીતે ખીલવવા નિષ્ફળ નીવડ્યાં. પરિણામે તે બાળક જુરી સંગતમાં પડવાથી તેનું બુદ્ધિ બળ બુદેજ માર્ગે વળ્યું. તેને મોતની સમહુરતાં વડા ન્યાયાધીશે કહ્યું કે : તારા બુદ્ધિ બળનો તં ધણો ખરાબ ઈપયોગ કીધો છે. બે તારા બચપણથી તારાં માબાપે તને સારી તાલીમ આપી હોત, તો આબેલું તારા દેશને મોટો ઉપયોગી થઈ પડત. અને તારાં માબાપની કીર્તિમાં હું મોટો ભમેરો કરત. પણ તારાં માબાપની બે દરકારીથી આબે તારે ફાંસીની સજા બગિવની પડશે.

(b) એક વખત એક માતાએ પોતાના નાના બાળકને નદી કીનારે ફરવા મોકળું, સાથે એક આયા તો હતી જ અને સાથે એક બાલદી પણ રમવા માટે લીધી હતી. તેઓ ત્યાં પહોંચ્યા પછી બાળક તો બાલદી લઇને તેમાં એક એક પથરો વીણી વીણીને પોતાની ધીમી ગતિએ બાલદીમાં નાખવામાં મશગુલ હતું. આસપાસ શુંથાય છે, કે કેટલો વખત ગયો છે તેનું તેને ભાન નહોતું. ધરે પાછો ફરવાનો વખત થયો છતાં બાલદી હજી આખી કાંકરાથી ભરાઈ નહોતી. પછી આયાને થયું કે ચાલને બાળકને હું જ મદદ કરીને જલદી બાલદી ભરી આપું. એમકરીને આયા બાળકની પાસે ગઈ અને એકદમ પેલી બાલદી કાંકરાથી ખાખી ભરી દીધી. પણ બાળક તો ખુશી થવાને બદલે ઉલટું રડવા લાગ્યું.

(c) એક આંધળો માણસ રાત્રિના સમયે હાથમાં એક કાનસ પકડી ને રસ્તે ચાલ્યો જતો હતો. તેટલાં સામી ત્યૂથી ઝડપથી આવતા એક રાહદારી સાથે તે અડકાયો. પેલા માણસે તુરત મીનસ ખોઈને મોટે સાદે પૂછ્યું કે, “તું કેમ ચાલે છે તે પણ જ્ઞે તો કેમ નથી.” બાપડા આંધળા એ કહ્યું : “બાપજી, કુંતો આંધળોધું તે મને કેમ દેખાય કે સામે કોણ આવી રહ્યું છે ?” પેલાએ વધુ ખીનધને પૂછક કે, “તું આંધળો છે તો આકાનસસા માટે હાથમાં રાખું ?” પેલા આંધળાએ નરમાસથી જબાબ દીધો કે, “બાપજી, એતો તમારા જેવા દેખતા એ માટે છે, કે તમે મારી સાલ અડકાવો નહિ. એ છતાં તમે મને અડકાયા તેમાં મારો શો વાંક ?” પેલો માણસ ચુપ થઈ, શરમીદો પડી, આંધળાની માફ માગવી ચાલતો થયો.

#### TRANSLATION FROM MARATHI INTO ENGLISH

Paper-Setters—{ PROF. D. R. BHANDARKAR, M.A., PH.D.  
MM. PANDIT SITARAM SASTRI.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following passages :—

(a) एकदां काहीं भारबी सौदागर इराणच्या बादशाहाकडे गेले व 20  
विकावयास आणलेले काहीं घोडे त्यांनी त्यास दाखविले. बादशाहाला ते

आवडले व त्याने ते विकत घेतले आणि खरेदीच्या किंमतीवर सौदागरांस आणखी दोन लक्ष रुपये देऊन तो त्यांस ह्यागाला काँ, आणखी उमदे उमदे घोडे आपले देशांतून घेऊन या. तसा करार करून सौदागरांनी निरोप घेतला. पुढे एके दिवशी राजा दारू पिऊन खुर्चीत आला असतां वजीरास ह्यागाला, माझ्या राज्यांत जितके मूर्ख आहेत त्यांची एक यादी तयार कर. वजीराने सांगितले, मी आधीच यादी करून ठेविली आहे व हुजुराचे नांवच अगदीं शिरोभागीं घातले आहे. राजाने विचारले, तें कां ? वजीराने उत्तर दिले, कारणे काँ, हुजुरांनीं दोन लक्ष रुपये घोडे घेऊन येणाऱ्या सौदागरांस दिले, पण त्यांची जामिन की घेतली नाही, किंवा ते आरवस्थानांत कोठे राहतात वगैरे कांहींच पत्ता विचारून घेतला नाही, तेव्हां या पेक्षां अधिक मूर्खपण तें कोणतें ? वादशाहा ह्यागाला, वरें, पण जर ते घोडे घेऊन येतील तर मग तुं काय करशील ? वजीर ह्यागाला, मग मी त्यांचीं नांवें मूर्खांच्या शिरोभागीं घालीन व हुजूरचें दुसऱ्या नंबरावर घालीन !

(b) प्रसिद्ध ज्योतिषी करचर याचा एक स्नेही असे, तो परमात्मा 20 नाही असें ह्यानें आपण ह्यागतों, ही चुकी आहे, अशी त्याची खात्री करचरनें पुढील प्रमाणें केली. स्नेही आज आपले भेटीस येणार असें पाहून त्यानें एक फारच शानदार खगोलाचा ग्लोब पैदा करून खोलींत एका कोपऱ्यांत ठेविला. तो अशारीतीनें काँ, स्नेहाची नजर त्यावर हटकून जावी. स्नेहीजेव्हां आला तेव्हां अदमास केल्याप्रमाणें त्याची नजर त्या ग्लोबावर गेली व त्यानें विचारले काँ, हा कोणाचा आहे व हा कोणी केला ? करचर ह्यागाला तो माझा नव्हे व कोणी केला ही नाही; सहजगत्या तो येथें आला. त्याचा नास्तिक मित्र ह्यागाला, हें अमर्दी अस्पृश्यनीय आहे. तुम्ही थट्टा करितां करचरनें आपला हेका न सोडतां तो आपल्या स्नेहास ह्यागाला, हा लहानसा पदार्थ यहच्छेनें उत्पन्न झाला या गोष्टीवर मात्र तुमचा विश्वास पडत नाही, आणि ज्या प्रचण्ड विश्वाचे हें एक लहानसें व अपुरें चित्त आहे, तें विश्व यहच्छेनें उत्पन्न झालें असें तुम्ही ह्यागतां दशोभेल कसें ? या कोटि क्रमानें स्नेही कुंठित झाला व ईश्वर आहे अशी त्याची खात्री झाली.

(c) अशा रीतीनें करण लढाईची तयारी करण्यांत गुंतला आहे 20 तोंवार त्याच वेळीं पाटण शहरीं कायचालले होते, तिकडे जरा दृष्टि फिरवूं या. नऊ वर्षे झालीं, तेव्हां पासून तें शहर मुसलमानांच्या हातीं होतें. तेव्हाच अल्प अवकाशांत ही त्याच्यांत फार फेरफार होऊन गेले असें दिसूं

लागलें. दिल्लीहून जे एकामागून एक निरनिराले सुभेदार तेथें पाठविण्यांत येत, ते रयते पासून लाखों रुपये खाऊन जातात, असा बादशाहाच्या मनाचा सिद्धान्त होता. यांत जो कोणी वाजवी रीतीनें वागे तो ही लुच्चा समजला जाई, आणि त्याची गतिही लुच्चासारखीच व्हावयाची, मग प्रामाणिकपणें कोणीं वका चालावें ? बादशाहाच्या या दृढ समजूतीचा परिणाम इतकाच झाला कीं, देशाचे उत्पन्न सरकारांत थोडें जाऊं लागलें ; रयतेला पिवून फार पैसा काढून घेण्यांत येऊं लागला आणि तो पैसा सुभेदारांच्या खाजगी पेटांत जाऊन बसूं लागला. जमिनीवरचा धारा वाढविण्यांत आला, यानें शेतकरी लोक भुकेनें मरूं लागले, व त्यांच्यावर जुलूम फार होऊं लागला. व्यापाराच्या जिनसांवर पहिल्यापेक्षां चौपट जकात बसविली त्यामुलें व्यापार कमी झाला. व्यापाऱ्यांचे फार नुकसान झालें. आणि या कारणामुलें सहजच शहराची संपत्ति कमी झाली.

TRANSLATION FROM MANIPURI INTO ENGLISH

Paper-Sellers — { Mr. SANJIBAN NADIA SINGH.  
,, RAJKUMAR ATOM PISAK-SINGH.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

Translate any two of the following passages into English :—

(a) ताहेबं पानवगी मरूम पुनमका मथल मथा अग्रावा जीव 20  
अपिशकश्च अचोवस् लै ; मथोहै अहगी मरुक्ती कया मरुमना लैकंदा .  
लै ; कया मरुमना हैशिंदा लै ; अहगा कया मरुम अमना कंशान्दस्  
हैशिंदस् लै । मथराहै पानवा हाहेदना लैगिवा पुनमक असिगी मरुंदा  
मी हाहेवा असिना थाहेदगी थोहेदोक हेन्दोकहै । अहगा जीव पुनमक  
असि ताहेबं मीगी मथा पोनवनि । मथोहैना लोशिंदा कंदोडैदस्  
मीगा थक मानवा नस्ते । जीवशिंगी मरुक्ता उटेक हाहेवा जां असि  
येवदा गाना निरंधिजे । मथोहैगी मथा पुनमक मरुना कूपहै ।

(b) हरिंथोहैशिंदा मीउहेवगी गामना काननवा ठोहै । मथोहैगी 20  
मरुम अहव थोहेरा कोहै । हरिंथोहैशिंगी थोहेराना पिरु पिरुवा मथुल  
गामना हंथल, अमस्त्रं मथुल थुदिंदा मरुम अमम थुहै । नोत्रुथादा लै  
पानां शांते, शांलवस् नोशी हैशिंदा मीगी थोहेहै अह चामथोकथि ।

বসন্তগী মতমদা লৈ মখল মখা অরাধা শাংলি। হয়িংখোইশিংনা লৈ  
পূমনমক অহুদগী লৈহী চেকশিন্না পুরকতুনা খোইরাদা ধমই। মহম অহু  
লোকলগা খোইহী লোবা যাই। খোইরা অহু শুংলগা খোইরু ধোকই।

(c) পৃথিবীদা মখল মখা যামবা য়ুম উবা ফংই। গ্ৰীণলগু হাইনা 20  
কোবা যামনা নিংমবা লৈবাক অমা লৈ। মফম অহুদদি চহিগী মলুংদা  
খা তরামুকতি উল্লা লৈপাক অসি কুপ্তনা লৈ। মফম অহুদা উবা যামনা  
তাংই। অহোবা অহুস্থ খুত্প তরা তরানিখোইদগী হেননা বাংদে। মরম  
অহুনা মফম অহুদা লৈবা মীশিংনা উবা ফংদবনা উননা য়ুম শাহুনা লৈ।  
আফ্রিকাগী কন্নি কন্নিকমবা মফমদা মৌনা উ অচৌ অচৌবগী মশাদা উনানা  
খাংবোক শাহুনা লৈ। মরম অসিনা অহিংদা মখোইনা শা ঙাগী কিফম  
লৈত্রে।

TRANSLATION FROM KHASI INTO ENGLISH

Paper-Setters—MR. ROY ROWLAND THOMAS, M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

Translate into English any two of the following passages :—

(a) Na ki jaid bynriew baroh ki ba shong ba Germany ha ka spah 20  
snem ka ba san ki nongiapom ki ba stad tam ki long ki Frauks, kine ki la  
iaid lyng ba ia ka wah Rhine, ki la jop ia ka ri Gaul bad ki la jer kyrteng  
ia ka ka ri France ka ba daug sah haduh nynta. Ta ki la ialam da U  
Syiem u ba kyrteng U Clovis u ba la um shyim long Kristan ruh, u don bun  
ki jinglong ba bha bad ba donburum. Ka tnga jong u ka Clotilda ka la  
long ka Kristan bad ia U Clovis u tip tang khyndiat eh ia ka miam Kristan  
ruh u pyni bora bor ba u burom ia ki Lyngdoh bad ki jaka bakhuud.

(b) Ka jingkoit-jingkhiah ka long kawei na ki jingkyrkhu ki ba 20  
khrav tam ha ka jingim u briew. Ka long ka tynrai ki jingsuk baroh.  
Na ka jingkhiah krat mih ka jingsngew suk bad ka jingsngewhun. Na ka  
byinkoit bymkhiah, ka spah, ka jinguang-jingtip bad ka bor ki duh shi bun  
ka dor jong ki. Ka long ka ba eh shi bun ia u briew, la u lah ban  
riewapah ne donbar ne stad katno katno ruh, ban suk khlem ka jingkoit-  
jingkhiah. U briew u ba duk u ba bieit bad u ba raitong pynban, u lah eh  
ban suk tang ba u koit, u khiah krat bha.

(c) Kat kum ka jingiathubkhana pateng ka hima Sohra ha ki por 20  
barim bajah, ka la long ka jaka shong jong ki shi bun ki blei ki ba don  
nam ki ba synshar ia ka jingim ki briew. Ki ong ba kine ki blei ki ju  
shong ha ki katto katne ki jaka ki ba la niew khuid na ka bynta kata bad  
la khot ruh da ka kyrteng jong kita ki blei. U ba kongsan eh ha pdenz  
jong kine ki blei u la long U Mawlong Syiem, bad ia u lum ha u ba la  
tharai ba u shong la khot da ka kyrteng jong u haduh kane ka engi, bad  
ki traishnong jong ki katto katne ki nongrit ki dang ia knia hi ia u.



## TRANSLATION FROM ARMENIAN INTO ENGLISH

Paper-Seller—MR. ZEBEDEE HANANIAN

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English two out of the following three passages :—

(a) Ո՛ր երրորդ էջիսու յետ դարձաւ, ժողովուրդը նրան ընդունեց, քանի որ ամենքը նրան կրօնաւէրն էին : Եւ ահա, էջարես անունով մի մարդ եկաւ, ու ինքը ժողովարանի իշխանն էր. և էջսուսի ոտքը ընկնելով կաշառէր նրան որ իր տունը մտնի. ինչու որ մեկ հաւիկ աղջիկ ունէր, գրեթէ տասուերկու տարեկան, որ մեռնելու ամա էր. յայց էջիսուս էր : ոչ լսեց, պատասխանեց նրան ու ասեց, մի վախենալ, միայն հաւատա, ու պիտի ապրի :

(b) Հնդկաստանը, Ռանագոյի հետ, միաժամանակ Մնդիւայի գա ութը դարձաւ : Հնդկաստանը առաջ անտես սագիտական գաղութ էր. աւելի հարստութիւն քան թէ ոյժն էր, գլխաւոր տեղը բռնում : Այսօր իսլանդից, Հնդկաստանը աւելի կարեւոր քաղաքականապէս քան թէ անտեսապէս : Հնդկաստանը Մնդիւական կայսութեան կենդրոնական ամենամեծ զինւորական պահականոցն է :

(c) Ման երկրում ժողովուրդն լայն մասապի կողմից բռնութիւնն ունի այն կառնիքի որ, քանի որ մի այսպիսի բան, ինչպէս մարդկային բնութիւն, բոլորի՞նն ունի. պատերազմներ միշտ տեղի կունենան աղջերի միջև :

Այս երկրի գլխաւորապէս հետաջողն է, տգիտ և բռնից նշանակալութեան պակասից և պարզ մտածելու անկարողութիւնից : Կրտսերազմը կասեցնելու համար, մարդկութեան երեսփայութիւնը պէտք է արթնցնել և գործի գնել շինարարութեան և ոչ թէ կործանելու համար : Փառք չկայ պատերազմի մէջ. և ոչ էլ օգուտ, միայն մի քանի զրոյսաւէրներ և ջինագործներ են օգտուում : ինչպէս, որ երեւան են հանել, վերջերս թէ յաղթող ու նմանապէս պարտուող աղբերը :

TRANSLATION FROM NEPALI INTO ENGLISH

Paper-Setters—{RAI SAHEB HARIPRASAD PRADHAN, M.A.  
MR. BODHIKRAM ADHIKARI, M.A.

(Candidates are required to give their answers in their own words as far as practicable)

The figures in the margin indicate full marks

Translate into English any two of the following :—

(a) भरद्वाजका ईश्वरा सुनेर श्रीरामले भन्नु भयो, “मुनीश्वर, 20  
तपाजीको आज्ञा सत्य हो. मेरा मनमा पनि यही लागेको थियो. जसरी  
भए पनि भोली म अयोध्यामा अवश्य पुग्दछु.” यती भनेर रामचन्द्रले  
फेरी हनुमान् तिर फरको भन्नु भयो, “महावीर, तिमी अहिल्यै इन्द्रावर  
पुरको बाटो गरी गुहजीलाई म आएको खबर देऊ अयोध्या जाऊ. वहाँ  
भरतलाई भोली म सुग्रीव विभीषण आदि सैन्यका साथ आइ पुग्नेछु भन्ने  
खबर सुनाएर वहाँको हाल खबर सबै बुझेर आए. कदाचित् तिमीलाई  
यही वम भनी आउन दिनुन भने उही वसन्. हामी सबै भोली तिम्रा  
पछि पछि आइ पुग्नेछौं. यस्तो रामचन्द्रको आज्ञा पाएर हनुमान्जो  
त्यतावाट हिडेर इन्द्रावर पुरमा पुगे. वहाँ उनले गुहजी सङ्गभेट गरेर  
उनलाई रामचन्द्रको हाल बताए. तेता वाट हनुमान् अयोध्या बाहिरको  
नन्दिग्राम नामी ठाउँमा पुगे. यहाँ भरतजी जटापाली मृगको छाछा ओढेर  
गुरुमन्त्रो हरूका साथ गद्दी मा पूजा गरि राखेका रामचन्द्रका खराउ नगिचै  
बसेका थिए.

(b) द्रोणाचार्यको यसवचनले गर्दा कर्णको उत्साह बढ्यो. 20  
उनीफेरी युद्धमा उद्यत भए. त्यस वेला त्रिचरा बालक अभिमन्यु धेरैवेर सम्म  
सङ्ग्राम गर्दा गर्दा थाकि शक्केका थिए. तै पनि उनले सङ्ग्राम देखी हटनु उचित  
ठानेनन्. आफनु वीरतालाई कत्तिकंती न गराई लड्न थाले. युद्ध हुँदा  
हुँदैमा कर्णले अकस्मात् अभिमन्युको हातको धनु काटेर गिराइ दिए.  
त्यसै वेलामा भोज नामक एक वीर राजाले उनका रथको चार घोडालाई  
मारि दिए. कृपाचार्यले पृष्ठ रक्षक योद्धाहरूर सारथीलाई विताइ दिए.  
अब के थियो ? काँतर एक साधारण योद्धा पनि अभिमन्यु सङ्ग लड्न  
अघिसर्न थाल्यो. अधर्मी कौरव हरूमा धर्माधर्मको विचार थिएन. छठ  
महारथी हरू एक साथ मिलेर युद्धनियं मलाई छोडी शस्त्रथ विहीन  
एकछा अभिमन्युमा थो वाणको वर्षा गर्न थाले. यो महा आपत्ता पनि  
वीरबालक अभिमन्युले रणभूमि छोडने विचार एक पलापनी मनमा लिएनन्.

(c) रामचन्द्रका वनवासको समाचार सुनेर सीताजीका मनमा 20  
अनेक तर्कवितर्क परि रहेको थियो. वहाँले श्रीरामलाई हतियार लिन  
आएको देखना साथ, विद्वलहुदै पाउमा परेर यो विन्ती गर्नु भयो.



TRANSLATION FROM TELUGU INTO ENGLISH

Paper-Setter—DR. B. RAMCHANDRA RAU, M.A., PH.D.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

Translate any two of the following passages into idiomatic English :—

(a) ఇరుపక్షములవారును సర్వసన్నాహము లొనరించుకొని యుండుటచే నిరువురును దమతమ ఫిరంగులు మ్రోగించుచు, యుద్ధమునకుఁ దలపడిరి. ఆ కోలాహలములో, నాంగ్ల కాల్పలము ముందుకు నడచెను. తోడనే, కాశిము పాశ్చాత్య సైన్యాధిపతుల సైన్యవిభాగములును, కంపెనీ యూరపియను దళమును నొండొరుల దాకెను. యుద్ధము ప్రారంభమగుట గాంచి, దక్షిణపార్శ్వమున నుండిన అసదుల్లాఖాను తన ప్రసిద్ధాశ్విక దళముతో నటు దిరిగి, వాయువేగమున నతి సాహసముగ వైరిపై లంఘించెను. పిడుగువలెఁ బడిన వైరిని వారింపఁజాలకుండుటచే, నాంగ్లసైన్య వామభాగము తుత్తునియ లాయెను. అచ్చటి యాంగ్లసిపాయిలు ధైర్యముతో బోరాడిరి, కాని, కార్యము లేకపోయెను. ఖానుయొక్క సైనికుల కరవాలముచేఁ గొందఱు నఱకఁబడిరి. కొందఱు, సమీపముననుండిన “బాస్సలీ” నదిలోనికిఁ దరుమఁబడిరి. తోడనే,

శంభువించిన మహాపద్రవము గుర్తించి, వెనుకనిలిచియుండిన  
సిపాయి పటాలమును వారి సాహాయ్యమునకై యాంగ్ల  
సైన్యాధిపతి పంపఁగడంగెను.

(b) ఒకనాటి వెన్నెలలో వన మంతయుఁ దిరిగి వేసారి  
యాహార మెక్కడను దొరకకపోవుటచేత సాహసముచేసి చిక్కి  
యున్నబక్కతోడఁ లొక్కటి గ్రామములోఁ బ్రవేశించి యొక  
ధనికునియింటిముందఱఁ దిరుగుచున్నబలిసియున్న యొక కుక్కను  
జూచెను. అప్పు డాతోడఁలు కుక్కనమీఁపమునకుఁబోయి  
నమస్కరించి కుశలప్రశ్నము చేసి తనబంధుత్వమును దెలుపుకొని  
“మిత్రుడా! నీవు మిక్కిలి యారోగ్యదశలో నున్నట్లు కనబడు  
చున్నావు. ఇటువంటి కాయపుష్టియు సుందర విగ్రహమును  
గలవానిని మనబంధువర్గములో మఱియెవ్వరిని నే నీవఱకుఁజూచి  
యుండలేదు. నాకంటె నెక్కువమంచిస్థితిలో నీవెట్లుండఁగలిగి  
తివో కారణము కొంచెము నాయం దనుగ్రహించి తెలుపుము.  
నన్ను నేను బ్రశంసించుకొన్నచో నాత్మస్తుతిగా తోచునేమో  
కాని నిజముగా నేను నీకంటె పదిమడుగు లెక్కువసాహసముతో  
వెలువడి యెక్కడ నెక్కడనో యున్నరహస్యస్థలము లన్నియు  
నీకంటె నెక్కువగా తిరిగి ప్రతిదినమును పొట్టకయి నేను నీకంటె  
సహస్రగుణము లెక్కువగా పాటు పడుదును. అయినను కడుపు  
నిండక యాఁజలిచేత బాధపడుచు నే నిట్లు చావునకు సిద్ధముగా  
నున్నాను.” అనిపలికెను.

(c) పూర్వకాలమునం దొకవేటగాడును సింహమును వనములో నొకచోటఁ దారసించినప్పుడు జరిగిన సంభాషణము లో బలమునందు మనుష్యుఁ డెక్కు-వా సింహమెక్కు-వా యన్న ప్రశ్నము వచ్చెను. అప్పుడావేటగాఁడడవిలోఁ దమ కెదురుగా సింహమును మనుష్యుఁడు పట్టుకొని యలయించుచున్నట్లు మ లఁచబడియున్న రాతి విగ్రహమును సింహమునకుఁ గనబడిచి, మృగరాజుకంటె మనుష్యుఁడే యధికుఁ డన్న తనవాదమును స్థాపించుటకయి దాని నొకనిదర్శనముగాఁ జూపెను. ఆమాటలకు పకపక నవ్వి “నీవాదమునకుఁగల బల మంతయు నింతే ధైర్యపక్షమున నింతకంటె దుర్బలహేతు వింకొకటి లేదు. రాతియం దావిగ్రహములను మలఁచినశిల్పి మనుష్యుఁడుగాక సింహమే యయియుండినపక్షమున, సింహమే మనుష్యునిఁ బట్టుకొని యలయించు చున్నట్లు చెక్కి-యుండును.” అని సింహ ముత్తరము చెప్పి వానివాదమును ఖండించెను.

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## TRANSLATION FROM MALAYALAM INTO ENGLISH

*Paper-Setter*—RAO BAHADUR L.K. A.K. AIYER, B.A., L.T.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following passages :—

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(a) അഗ്നിമിത്രൻ വിദിശാ നഗരത്തിൽ ഇരുന്നു രാജ്യഭാരം ചെയ്തു. വിദിശാനഗരത്തിന്റെ തെക്കെ അതിർത്തി നമ്മുമാ നഭിയായിരുന്നു. അവിടെ അഗ്നിമിത്രൻ തന്റെ ഭാര്യയായ ധാരിണിയുടെ ഒരു സഹോദരനെ സേനാനായകനായി നിയമിച്ചിരുന്നു. നമ്മുമാരുടെ തെക്കുവശം വിദർഭരാജ്യമാണു. ആ രാജ്യത്തിലെ രാജാവ് യജ്ഞസേനനായിരുന്നു. അവന്റെ ചിത്തപ്പന്റെ മകനായിട്ടു മാധവസേനൻ എതിരാളിയായിരുന്നു. യജ്ഞസേനനും മാധവസേനനും തമ്മിൽ നിരന്തരം കലഹിച്ചു കൊണ്ടിരുന്നു.

(b) അപ്പോൾ മാധവസേനൻ തന്റെ അനുജത്തിയായ മാതൃപിതയെ അഗ്നിമിത്രൻ വിവാഹം ചെയ്തുകൊടുപ്പാൻ നിശ്ചയിച്ചു. തന്റെ മന്ത്രിയായ സുമതിയേയും ഏതാനും ആളുകളെയും രക്ഷയ്ക്കു വെണ്ടി

വിളിച്ചു. മാതൃപിതൃകളെ അറിയിക്കാനും സമർപ്പിക്കാനായി വിളിക്കുകയും ചെയ്തു. ഈ വിവരം യജമാനനോട് അറിഞ്ഞു വഴിയിൽ വെച്ചു മാധവസേനനെ അറിയിച്ചു. യജമാനൻ ജയിച്ചു, കാരാഗൃഹത്തിൽ അടച്ചു. യജമാനൻ ജയിച്ചു സംശയം എന്നൊക്കെപ്പോലും തന്റെ സഹോദരിയെ സഹായത്തിന്നു വെച്ചു കൊണ്ടു മാതൃപിതൃകളെ കൂട്ടത്തിൽ നിന്നു വിളിച്ച് ഒളിച്ചു ഓടിക്കളഞ്ഞു.

(c) കേരളരാജ്യത്തിൽ മഴക്കാലം ആരംഭിക്കുന്നു. സാധാരണയായി മഴ ആരംഭിക്കുന്നതു ഏകമാസം മുമ്പായിട്ടായിരിക്കുന്നു. ചില കൊല്ലങ്ങളിൽ മുമ്പായിട്ടും കുറെ താമസിച്ച് തുടങ്ങാറുണ്ട്. മഴ അധികം പെയ്യുന്നത മിഥുനത്തിലും കർക്കടകത്തിലും ആകുന്നു. ഈ മാസങ്ങളിൽ പുഴകളിലും തോടുകളിലും വെള്ളം നിറഞ്ഞു ഒഴുകും. എന്നാൽ അടുത്ത കാലങ്ങളിൽ കുറവായിട്ടും അതിവേഗം കൊണ്ടു ഇടിഞ്ഞു പോകുകയും അവയുടെ മണ്ണ് കല്ലും പ്രവാഹത്തിൽ പുഴകളിൽ വന്നു ചേർന്നു തുറന്നു പോകുന്നു.

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## TRANSLATION FROM KANARESE INTO ENGLISH

*Paper-Setter—MR. P. APPAJI RAO, B.Sc.**Candidates are required to give their answers in their own words  
as far as practicable**The figures in the margin indicate full marks*

Translate any two of the following Kanarese pieces into chaste English :— 40

(a) ಯುಧಿಷ್ಠಿರನ ಧಾರ್ಮಿಕಸ್ವಭಾವವನ್ನು ಕಂಡು ಜನರು ಅವನಿಗೆ ಧರ್ಮಪುರುಷನೆಂದು ಅನ್ವೇಷಿಸಿದ್ದರು. ಅವನು ಎಲ್ಲರ ಮೇಲೂ ತನ್ನ ಒಡಹುಟ್ಟಿದ ಲ್ಲಾ ತಮ್ಮಂದಿರಂತೆ ಪ್ರೀತಿಮಾಡುತ್ತಿದ್ದನು. ಬಹಳವೇನು? ಪ್ರತ್ಯಕ್ಷ ದುರ್ಯೋಧನನನ್ನು ಒಂದುಸಾರೆ ಹಿಡಕೊಂಡು ಬಂದು ಅವನ ಮುಂದೆ ನಿಲ್ಲಿಸಿದಾಗ್ಗೆ ದುರ್ಯೋಧನನು ಶತ್ರುವಾದಾಗ್ಯೂ ಧರ್ಮರಾಯನು ಅವನ ಮೇಲೆ ದಯತೋರಿಸಿ ಅವನನ್ನು ಬಿಟ್ಟುಕೊಟ್ಟನು. ಇವನು ಮಹಾ ಈಶ್ವರಭಕ್ತನಿದ್ದನು. ಶಾಂಡವರ ಮೇಲೆ ಎಷ್ಟು ಸಂಕಟಗಳು ಬಂದಾಗ್ಯೂ, ಅವರಿಗೆ ಎಷ್ಟು ಕಷ್ಟ ಗಳು ಸಂಭವಿಸಿದಾಗ್ಯೂ, ಧರ್ಮರಾಯನು ಎಲ್ಲಾಭಾರವನ್ನು ಪರಮೇಶ್ವರನ ಮೇಲೆ ಹಾಕಿ, ಅವುಗಳನ್ನು ಶಾಂತ ರೀತಿಯಿಂದ ಸಹನ ಮಾಡಿಕೊಂಡನು. ಸಂಕಟದಲ್ಲಿ ಸಹ ಅವನು ತನ್ನ ಸನ್ಮಾರ್ಗವನ್ನು ಬಿಡಲಿಲ್ಲ. ಇವನಲ್ಲಿ ಸಹನಶಕ್ತಿಯೂ, ಶಾಂತಿಯೂ ಸಾಧುವುರುಷರಲ್ಲಿರುವಂತೆ ಸಾಕ್ಷಾತ್ಕಾರವಾಗಿದ್ದವು. ಎಷ್ಟೋ ಪ್ರಸಂ

ಗಗಳಲ್ಲಿ ಭೀಮಾರ್ಜುನರು ಮತ್ತು ದ್ರೌಪದಿಯು ಅವನಿಗೆ ಕಠೋರ ಶಬ್ದಗಳಿಂದ ಮಾತಾಡಿದಾಗ್ಯೂ, ಅವನು ಸೌಮ್ಯ ಶಬ್ದಗಳಿಂದಲೂ, ಮಧುರ ನುಡಿಗಳಿಂದಲೂ ಅವರ ಸಿಟ್ಟನ್ನು ಶಾಂತಪಡಿಸುತ್ತಿದ್ದನು. ಪ್ರಪಂಚದಲ್ಲಿದ್ದು ಹ್ಯಾಗೆ ಸಾಧುತ್ವವನ್ನು ಇಟ್ಟುಕೊಳ್ಳಬೇಕೆಂಬುವದು ಧರ್ಮರಾಯನ ಚರಿತ್ರದ ಮೇಲಿಂದ ಚೆನ್ನಾಗಿ ತಿಳಿಯುತ್ತದೆ.

(b) ಪ್ರತಿಯೊಬ್ಬ ರೈತನೂ ಇಷ್ಟು ನಿಕ್ಕಷ್ಟು ಸ್ಥಿತಿಯಲ್ಲಿಲ್ಲ. ಆದರೂ ಲಕ್ಷಾಂತರಮಂದಿ ರೈತರ ಅವಸ್ಥೆಯು ಇದಕ್ಕಿಂತಲೂ ಉತ್ತಮವಲ್ಲವೆಂದು ದೈರ್ಯವಾಗಿ ಹೇಳಬಹುದು. ಅನೇಕ ರೈತರುಗಳಿಗೆ ಹೆಚ್ಚು ಜಮೀನುಗಳಿಲ್ಲ. ಬಡರೈತರ ಅಲ್ಲ, ಬಲಿಷ್ಠರಾದ ರೈತರಿಗೂ ಕೂಡ ಎಷ್ಟೋ ತೊಂದರೆಗಳು ಬಂದೊದಗುತ್ತವೆ. ಇವುಗಳನ್ನು ನಿವಾರಣೆ ಮಾಡಲೋಸುಗ ನಾನಾದೇಶದವರು ನಾನಾಬಗೆಯಾಗಿ ಪ್ರಯತ್ನ ಮಾಡುತ್ತಿದ್ದಾರೆ. ಇವುಗಳಲ್ಲಿ ರೈತರ ಉಪಯೋಗಾರ್ಥವಾಗಿ ಪರಸ್ಪರ ಸಾಹಾಯಕ ಸಂಘಗಳನ್ನು ನಿರ್ಮಿಸುವುದು ಕೇವಲ ಮುಖ್ಯವಾದುದು. ಈಗಲೀಗ ಇವುಗಳ ಉಪಯೋಗವು ಜನರಿಗೆ ತಿಳಿಯುತ್ತಾ ಬಂದಿದೆ. ~~ಒಂದು ಹಳ್ಳಿಯಲ್ಲಿ ಒಂದು ಇಂಥಹ ಸಂಘವು ಇಲ್ಲದಿದ್ದರೂ ಹತ್ತಿರ ಹತ್ತಿರವಿರುವ ನಾಲ್ಕೈದು ಹಳ್ಳಿಗಳಿಗಾದರೂ ಒಂದು ಸಂಘವಿರಬೇಕು.~~ ಪ್ರತಿಯೊಬ್ಬ ರೈತನ ಬಳಿಯಲ್ಲಿಯೂ ಅಲ್ಪಸ್ವಲ್ಪ ಹಣವಿದ್ದರೂ ಈ ಹಣವೆಲ್ಲವೂ ಒಟ್ಟುಗೂಡಿಸಿ ಸಂಘದಲ್ಲಿಟ್ಟಾಗ ಹಳ್ಳಿಯ ರೈತರೆಲ್ಲರಿಗೂ ಅವಶ್ಯವಾದ ಕಾಲದಲ್ಲಿ ಉಪಯೋಗಕ್ಕೆ ಬರುತ್ತದೆ. ಸಾಲದ ಮೇಲಣ ಬಡ್ಡಿಯು ಸುಲಭವಾಗಿರುವುದರಿಂದ ರೈತನು ಸುಲಭದಲ್ಲಿ ದಿನಾಳಿಯಾಗುವುದಿಲ್ಲ. ವರ್ತಕನು ಅಶಕ್ಯನಾದ ಬಡ್ಡಿಯನ್ನು ಹಾಕಿ ರೈತನನ್ನು ಸೂರೆ ಮಾಡಲು ಅವಕಾಶವು ಕಡಿಮೆಯಾಗುತ್ತಿದೆ. ರೈತನ ಜೀವನಕ್ಕೆ ಅತ್ಯವಶ್ಯಕವಾದ ಪದಾರ್ಥಗಳೆಲ್ಲವನ್ನೂ ಈ ಸಂಘವು ಸುಲಭ ಬೆಲೆಗೆ ಬಡಗಿಸಿ ಕೊಡುತ್ತದೆ.

(c) ನಮ್ಮ ಆಯುರ್ವೇದ ಶಾಸ್ತ್ರದಲ್ಲಿ ವೋಕ್ಷಸಾಧನವಾದೀ ಮಾನವ ಶರೀರವನ್ನು ಆರೋಗ್ಯ ಸ್ಥಿತಿಯಲ್ಲಿ ಕಾಪಾಡಿಕೊಳ್ಳುವುದಕ್ಕಾಗಿ ಅನುಸರಿಸಬೇಕಾದ ಸೂತ್ರಗಳು ಹೇರಳವಾಗಿವೆ. ಭಾರತೀಯರ ಆಚಾರಗಳೆಲ್ಲವೂ ಆರೋಗ್ಯಕ್ಕೆ ಸಂಬಂಧವಾದುವು. ಎಂಬಲು ಮಾಡಬೇಡವೆಂದು ಮಕ್ಕಳಿಗೆ ಹೇಳಿಕೊಡುತ್ತೇವೆ. ಉಗುರುಗಳನ್ನು ಕಡಿಯಕೂಡದೆಂದು ಹೇಳುತ್ತೇವೆ, ಕಂಡಕಡೆ ಉಗುಳಕೂಡದೆಂದೂ, ಹೇಸಿಗೆ ಮಾಡಕೂಡದೆಂದೂ, ಮಲಮೂತ್ರಗಳ ವಿಸರ್ಜನೆಯಾದನಂತರ ಪ್ರಕ್ಷಾಲನ ಮಾಡಿಕೊಳ್ಳಬೇಕೆಂದೂ, ಮಾರ್ಕಟ್ಟಿನಲ್ಲಿ ತರಕಾರಿಯನ್ನು ಕೊಂಡು ಅದನ್ನು ಮನೆಗೆ ತಂದೊಡನೆಯೇ ಶುಭ್ರವಾದ ನೀರಿನಲ್ಲಿ ಚನ್ನಾಗಿ ತೊಳೆದು ಉಗ್ರಾಣದಲ್ಲಿಡಬೇಕೆಂದೂ, ಹೊರಗೆ ಹೋಗಿ ಸುತ್ತಿಕೊಂಡು ಬಂದರೆ ಕಾಲುಗಳನ್ನು ತೊಳೆದುಕೊಂಡು ಕೋಣೆಯೊಳಕ್ಕೆ ಹೋಗಬೇಕೆಂದೂ, ಒಬ್ಬನು ಎಂಬಲು ಮಾಡಿದ ಲೋಚಾವನ್ನು ಮತ್ತೊಬ್ಬನು ಚನ್ನಾಗಿ ತೊಳೆಯದೆ ಉಪಯೋಗಿಸಕೂಡದೆಂದೂ, ರೋಗಿಯನ್ನು ಮುಟ್ಟಿದರೆ ಕೈತೊಳೆದುಕೊಳ್ಳಬೇಕೆಂದೂ, ಮದ್ಯವನ್ನು ಸೇವಿಸಕೂಡದೆಂದೂ ಹೇಳುತ್ತೇವಷ್ಟೆ ! ಆದರೆ, ಈ ನಿಯಮಗಳನ್ನು ಉಲ್ಲಂಘಿಸುವುದರಿಂದ ಆಗುವ ಕೆಡಕನ್ನು ನಾವು ಬನಗಳಿಗೆ ತಕ್ಕ ರೀತಿಯಲ್ಲಿ ತಿಳಿಸುವುದಿಲ್ಲ.

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TRANSLATION FROM BURMESE INTO ENGLISH

Paper-Setters—{ MAUNG WE LIN.  
MAUNG BA, B.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate any two of the following passages into English :—

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(a) အဇာတသတ် မင်းသည် ဒေဝဒတ် အကြံပေးသည် အတိုင်း  
စမည်းတော် ဗိဇ္ဇိသာရ မင်းကြီးကို သတ် ပြီးသော်။ ဒေဝဒတ် သည်  
အဇာတသတ်ပင်း အထံသို့ သွား၍။ တကာတော် မင်းမြတ်။ ထကာ  
တော် အလိုအတိုင်း ပြည့်စုံပြီ။ ငါ၏ အလိုမ ပြီးမရောက်သေး ဟုဆို၏။  
ရှင်ဒေဝဒတ်။ အရှင်ဘုရား အဘယ်အလိုရှိတော်သနည်း ဟုမေး၏။  
အရှင်မင်းကြီး။ ငါ ကား သားထပ်ပါး နှင့်ပြည့်စုံသော ဘုရားကို သတ်  
၍ ဘုရားလုပ်အံ့သည် မဟုတ် လောဟုဆို၏။ ရှင်ဒေဝဒတ်။ ထိုသို့လည်း  
ကား အကျွန်ုပ် အဘယ် အကြောင်းကို ပြုရပါအံ့နည်း ဟုမေး၏။ အရှင်  
မင်းကြီး။ လေးသမား ကျော်တို့ကို စည်းဝေးစေ ဟုဆို၏။ အဇာတ  
သတ်မင်းလည်း ရှင်ဒေဝဒတ် စကားကို ကောင်းပါ ပြီစိမ့်၍။ အမျိုးကို  
ပေါက်အောင် ပစ်နိုင်သော လေးသမား ငါးရာ ဘို့ကို စည်းဝေးစေ၍။  
လေးသမား ငါးရာတွင် လက်ရွေး လေးသမား ကျော် သုံးကျိပ် တ  
ယောက်တို့ကို ရှင်ဒေဝဒတ် စကားကို လိုက်နာ ကြလေကုန် ဟုဆို၍ ရှင်



(၈) မင်းကြီးသည်ဥယျာဉ်တော်၌ အထိုရှိသမျှထွဋ်လည်စံပသ်  
 တော်မူ၍ မြို့သို့ဝင်၍ အခါရောက်သဖြင့်ဥယျာဉ်တော်မှထွက်လေသော်။  
 ထိုသရက်ပင်ကိုမြင်လျှင်။ ဤသရက်မင်ကားငါ့ဝင်တော်မူစဉ်ကနှင့်  
 မတူ။ ယခုအဘယ်ကြောင့်ဤသို့ရှိလေသနည်းဟုအမတ်တို့ကိုမေး၏။  
 အမတ်တို့လည်း။ အရှင်မင်းကြီး။ ကိုသ်တော်အားအဦးဆက်၍ပြီး  
 ဖြီဟုမိလ်ပါရဲမက်သို့လှလက်ဆွတ်ချူကြသဖြင့်သရက်ရှား၍လက်များ  
 ဖြင်းကြောင့်အပင်တော်ခက်ရွက်ပွန်းမိပါသည်ဟုဈောက်တားကြ၏။  
 မင်းကြီးလည်း။ အချင်းတို့။ ယင်းသို့ဖြစ်လျှင်ဤအပင်သာစနောင်  
 စနင်အသို့ကြောင့်ရှိရသနည်း။ ထိုအပင်ကားခက်ရွက်မပွန်းမရှိရှိပါ  
 သည်ဟုဈောက်တားကြ၏။ ထိုစကားကိုဘုရားလောင်းမဟာဇနက  
 မင်းကြီးကြားလျှင်ဤသို့သံဝေဝဖြ်တော်မူ၏။ ဤအပင်ကားအသီး  
 မသီးသောကြောင့်စိမ်းစိမ်းလတ်လတ်ညိုဖတ်သောခက်ရွက်ဖြင့်နှစ်  
 သက်သွယ်ပြကတွေ့အထိုင်းရှိ၏။ ဤအပင်ကားအသီးသီးခြင်း  
 ကြောင့်ဖျက်ဆီးတတ်သောသူနှင့်ဆက်ဆံသည်ဖြစ်၍ပြကတွေ့အထိုင်း  
 မတည်ရ။ ဤငြိပ်စည်းစိမ်မည်သည်လည်းရန်သူနှင့်ဆက်ဆံခြင်း  
 ကြောင့်အသီးသီးသောသရက်ပင်နှင့်တူ၏။ ရန်သူမဆက်ဆံသောစည်း  
 စိမ်ကိုရှာလျှင်ရတွေ့ရဟန်၏။ အဖြစ်သည်သာရန်သူနှင့်မဆက်ဆံသော  
 ကြောင့်အသီးမသီးသောသရက်ပင်နှင့်တူ၏။



## TRANSLATION FROM GARO INTO ENGLISH

*Paper-Setter—Miss A. WRIGHT**Candidates are required to give their answers in their own words  
as far as practicable**The figures in the margin indicate full marks*

Translate two only of the following into English :—

(a) Unon ua uamangna ia toaniko agane injok, Nasimangoni sawa 20  
ritchasa mesko mane aro uoni mangsa gimaenba, ua sotsku mangskuko  
bakrao donange uko nikkujana kingking ua gimagipani giinin reangjawa?  
Aro ua nikahao katchae atang pakkreo gate, nokona rebeae ripengskarang  
aro songsulrangko okamchimonge, uamangko ina. Ang bakso katchabo,  
maina angni mes gimagipako nikaha. Anga nasimangna agana, Ua gitan  
gisik pilna nanggijagipa sotsku saksu torowirangua bata, saksu papi gisik  
pilgipani gimini salgio katchaani gnang. 20

(b) Indiba angade Isolo singgenchim;  
Aro angni katako Isolna pakwatgenchim.  
Ua dalarangko aro amsokgijaniko,  
Chansokgija aiao immananirangko daka.  
Ua agilsako mikkako ona,  
Aro abarangona ebiko Watata.  
Ua ongiparangko chuo do na,  
Arokalingiparang silaona dedoako mana.  
Uamangni jakrang mangsonganiko dakjana gita,  
Ua chalakigiparangni chanchiarangko hingbangata.  
Gisik gnauggiparangko ua uamangni chalaki dakao keata,  
Aro chalakigipani kupatianiko sheloeta.  
Salo uamang andalako gronga,  
Aro sal jatchio walo gita rimdikdaka.  
Indiba uamangni kusikoniko ebikgiuinko,  
Aro bilakgipani jakoniko chanaigipako ua jokata.  
Indake bulgrigipana kadongani gnang.  
Aro kakketgijara kũkupa.

(c) Atchiahaon mande agilsakni pilak niamrangni ningo onga, jeni 20  
kosako ua bil manja. Jat aro mau paako see raenba mande agilsako  
atchija. Je obostao anchung atchia, uan anchingni janggi tanganiko  
mesokani onga. Je mandeni luhasko janapnasienga, uni jat aro madrangni  
gimin ontisa janapode, marong i janggi tanganio ua reaha talbate unina  
mangen iue kadonga.

Sundar Singh Sikh jat onga. Sikhranga autangtangko dilgipa  
Guruko manibe, iparang onga. Iamangni skanggipa Guru Nanak  
ongachim Guru Nanakna skang Sikh jat ongakatkujachim. Sikhni orto  
sninggipa. Nanak Isol saksu aro pilakon donga ine aganprakachim.  
Ua Hindu aro Musatman toromko apsan dakatna joton kabeshachim. Ua  
jakchi dakgimin bimargko olakiako aro jat maniako namnikjachim.

TRANSLATION FROM MODERN TIBETAN INTO ENGLISH

*Paper-Setter*—MR. KARMA SAMDON PAUL

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate any two of the following into English :—

40

(a) དེའི་དུས་སྐབས་ཁོ་ཁྱེད་ཀྱི་འཕྲིན་ལྷན་པོ་འོང་བའི་བཅའ་པོ་ཞེས་བྱ་བ་  
དེ་ལོག་པའི་སྐབས་དེ་ཁོ་རང་གི་འཁོར་ལྷན་པོ་བསྐྱེད་པ་ནས་སྤྱི་པ་། ང་ཡི་འཁོར་ལྷན་པོ་  
བདག་ལ་རྒྱུ་ཉན་དང་། ཡུལ་ཕྱོགས་སྤྱི་ཉིད་གོང་ཁྱེད་ཆེན་པོ་ན། ལྷན་པོ་དྲི་མེད་ཀྱན་ལྷན་  
ཞེས་བྱ་བ་དེས། མོར་ལྷན་པོ་སྤྱི་པ་བཟོད་བར་དཔེ་བཅས་དེ། ཕྱོགས་མེད་སྤྱི་པ་ཀྱན་ལ་  
བཟོད་བཅི། ཀྱན་ལྷན་པོ་ལ་ལོ་ལྷན་པོ་བསྐྱེད་པོ། ཁོང་གི་མོར་བྱ་དགོས་འདོད་དཔེ་  
འཛུགས་དེ། སྤོང་དུ་འགྲོ་དུས་སྐབས་ཡོད་དུ་མྱོས། དེ་ལ་ང་ཡི་ལྷན་པོ་དྲི་མེད་ལྷན་པོ་། ཞེས་  
གསུངས་པ་དང་། དེར་འཁོར་ལྷན་པོ་ན་རེ། མོར་བྱ་མི་ལྷན་པོ་སྤྱི་པ་ཀྱན་ལྷན་པོ་ཡོད་ཟེར།  
ལ་ལ་སྐྱེད་པོ་དེར་མི་སྤྱི་པ་ཟེར་པས་ལོན་མི་གཅིག་ཀྱང་མ་བྱུང་ངོ་། དེར་བྱས་ཟེ་གད་  
པོ་ཁ་མོ་སྤྱི་པ་ཉན་པ་ཡང་མེད་པ་ཞིག་ལངས་ནས། ལྷན་པོ་ཆེན་པོ་ལགས་བདག་གིས་  
འགྲོ་བར་ཞུའོ། ལམ་ཆས་དང་གོས་ལྷན་པོ་སྤྱི་པ་ཞིག་ཟེར། དེར་ལྷན་པོ་ལམ་ཆས་གོས་  
སྤྱི་པ་ནས་བཟོད་ངོ་།



(b) དེ་ནས་ཡང་ཉིན་པས་ནགས་འཐུག་པོ་ཉི་མ་སྒྲིབ་པ། འདྲི་སྒྲིན་གཏུག་པ་ཅན་  
 ཐམས་ཅད་ཉིན་ཡང་མོ་མཐོང་བ། གཅན་གཟན་ཐམས་ཅད་རྒྱུ་ཅིང་སྐད་འདོན་པ། ཏུག་  
 རྩ་འཁོལ་མའི་བ་རྒྱབས་སྒྲོག་པ་ཞིག་ཏུ་ཕེབས་སོ། དེའི་ཏུས་སུ་བཟང་མོ་འཛིགས་ཤིང་སྒྲོ་  
 ཅན་འདི་སྐད་ཅེས་གསུངས་སོ། ཡེ་མ་འདི་འདྲའི་གནས་དེ་ཅི་ཞིག་ཡིན། འདྲི་སྒྲིན་འབྲུང་པོ་  
 ཉིན་མོ་མཐོང་བ་དང་། རྩ་འཐུག་ཆེ་ཞིང་ཆོ་འཐུག་ལྟོན་པ་དང་། འཆི་བདག་བདུད་ཀྱི་གྲོང་  
 བྱིར་ཡིན་པ་འདྲ། ལྷག་དང་སིང་གི་གཅན་གཟན་ལ་སོགས་ཏེ། མི་དྲིད་མཆེ་བ་གཙོགས་ཅིང་  
 རྒྱུ་མས་པ་མཐོང་། ཏུག་རྩ་འཁོལ་མའི་བ་རྒྱབས་སེམས་པ་སྒྲོ། འདི་ནས་ཐར་པའི་ཏུས་ནི་མི་  
 འདུག་གོ། ད་ནི་སྒྲོག་གི་འདྲ་བྱེད་གཏོང་བ་འདྲ། སྐྱ་མ་རྩ་དང་དཀོན་མཆོག་རིན་པོ་ཆེ།  
 བདག་ཅག་བཟའ་མི་གཉིས་ཀྱི་སྒྲོག་སྒྲོ་བས་མཛོད། ཅེས་གསུངས་པ་དང་། རྒྱལ་བུའི་ཐུགས་  
 དཀོངས་ལ་བཟང་མོ་འཛིགས་པ་ཡིན་འདུག་དགོངས་ནས། འདི་སྐད་ཅེས་གསུངས་སོ།

(c) ཡབ་རྒྱལ་པོ་ས་སྒྲོང་གཤམ་པ་ཡང་དཔག་ཚད་བདུན་གྱི་སར་སྒྲོས་དང་བཅས་  
 བསྐྱ་བ་ལ་ཕེབས་སོ། བླེ་ཏིའི་པད་མོ་ཅན་གྱི་པོ་བྱང་ནས། ལྷང་བ་འོད་ཀྱི་གྲོང་བྱིར་བར་  
 མཚམས་ལ། གཏུགས་དང་། རྒྱལ་མཚན་དང་། བ་དན་དང་། བསེལ་གཡལ་དང་། ཇ་གཡལ་  
 དང་། ལྱར་བྱིས་དང་། རོལ་མོ་དང་། བསེལ་སྒྲིན་དང་། མཚོད་སྒྲིན་དང་། སྒྲུ་གར་  
 དང་། བི་ཡུང་དང་། ཏིང་ཤགས་དང་། གཡེར་ཁ་དང་། སྒྲིང་བྱ་དང་། ཏུང་ཆེན་ཀ་བ་འདི་  
 ལྟ་བུའི་སྒྲུ་ལ་སོགས་པའི་གྲོང་བྱིར་སྐྱང་ཐམས་ཅད་བྱལ་པར་བྱས་ཏེ་བསྐྱ་བ་བྱེད་དོ། དེར་  
 རྒྱལ་བུ་ཡབ་ཡུམ་གཉིས་དང་། སྐས་ལྷམ་སྤིང་གསུམ་དང་། བུས་ཅེ་གསུམ་དང་བཅས་པ་  
 ཅམས། ལྷང་བ་འོད་ཀྱི་གྲོང་བྱིར་ཞེས་བྱ་བར་ཕེབས་སོ། ལྷང་བ་འོད་ཀྱི་རྒྱལ་ཐུན་ཀུན་  
 གཟིགས་ཀྱི་རྒྱལ་པོ་ཞེས་བྱ་བ་དེས། རྒྱལ་བུ་ཡབ་ཡུམ་འཁོར་དང་བཅས་པའི་མདུན་ཏུ་ཐུག་  
 མང་དུ་འཚལ། མཚོད་པའི་བྱེད་བྱག་བསམ་གྱིས་མི་བྱལ་བ་ལྟལ་ལོ།

## TRANSLATION FROM LUSHAI INTO ENGLISH

*Paper-Setter—REV. E. L. MENDUS, B.A.**Candidates are required to give their answers in their own words  
as far as practicable**The figures in the margin indicate full marks*

Translate any two of the following passages into English of your own composition :—

(a) Tin, Kristiana chuan 'Engatinge hetiangah hian i intihluh?' 20  
a ti a. Tin, ani chuan 'Keima thu thua ka awm avang leh he khawvel  
nawmna leh hlâpna bianmin tilût a ni; tin, chung ang lawmna chu ka  
hlut êm êm thin a, nimahsela chungte chuan tunah chuan min tihre-  
hawm a, lung thi thei lo mi kher angin min tinâ a ni 'a ti a.

Tin, Kristiana chuan 'Tunah simin i lamlet thei lo vem ni?' a ti a.  
Tin, mi chuan 'Pathian'in ka sim a phal tawh lo. A thuin ring turin  
mi sui lo va, Anah ngei chuan hemi ripah hian mun khung a ni;  
khawvela mi zawng zawng pawh hian min tichhuak thei lo vang.  
A! Chatuan! Chatuan! Engtinge chatuana ka hrehawm tur chu ka  
tih ang?' a ti a.

Tin, Hrilfahtua chuan Kristiana hnensah chuan 'Hemi hrehawmzia  
hi kumkhua a i fimkhur theih nân i riluak vawng reng ang che' a ti a.  
Tin, Kristianan 'A, hoi chu a hlahhawm êm êm mai, insâm tuo te,  
invêng tur tein Pathianin min tanpui sela, hemi hrehawmzia hi ka  
theihnghlh loh nân 'a ti a.

(b) Tin, chu khawpui chu tlâng sâng tak chung a awm a ni a; 20  
nimahsela mi pahnd to chuan an hânah an kaih avangin harsa lo takin  
an lâwn thei a. An khawvel pante chu luih khân hnutehlah vek  
bawh a. Thia an loh tih lu kha zawngin an la sin zêl a, an lo chhuah  
leh khân erawhchu an lo sin ta lo a ni. Chutichuan chumi khawpui  
awmna chu chhâm aia sâng mah ni sela, awl tak leh rangtakin an lâwn  
chho va; borakah sângtakah an chho va, an kal pih chuan chutia lui  
ata hirataka an chhuak thei leh amahni vêng tara thian tha tak te  
an lo neih avang chuan thlamuangtak leh lâwn takin an titi siah siah  
mai a.

Pathian vântirbkohte nêna an thu sawi chu chumi khaw ropuzia  
chu a ni. Anni chuan, 'A ropuzia chu sawi hleih a ni lo ve; chu chu  
Zion tlâng vân Jerusalem chu a ni a; vântirbkohte chhiarsên loh leh  
mi thianghlim leh misel tithat famkin tawh te an awm a ni.

*(c) Sihal Leh Mupui Thawnthu*

20

Mupui pakhat hi a note tan chaw zawng a ka lain sihal no lo  
inflam hi a hmu a, a chhuk a, a man sak ta a, tin, a thlawh pui hma  
in sihal pui chu a lohâwng a. a tap a tap mai a, tap chung chuan chhuah  
leh a ngên a. Nimahsela mupui chuan a bu chu thung sang tak a awm  
a nih avangin, sihal pui mangan zia chu pawisa lovin a bu ah chuan a  
thlawpui ta zêl a. Tin, sihal pui chu a tlân a, a kiang a phâl kang a  
thingthâ chu ava seh kawh a. mubu awmna ah chuan thingthu nung  
kenzin a lâwn ta mai a. Harsa deuh chuan a kâkpui chu a han chhuak  
a chutah chuan mupui chu a mangang chhe ta a, a bu leh a note  
chu an kang ang tin hmichhawh takin a thlawk thla ta a. Thu  
zâwdawh takin a no chu engmah tih lovin a zuk pe leh ta nge nge  
a ni.

## TRANSLATION FROM FRENCH INTO ENGLISH

Paper-Setters—{REV. FR. E. POPULAIRE, S.J.  
 {MR. NAGENDRANATH CHANDRA, M.A.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following passages :—

(a) Il y avait un enfant qui était né avec les yeux fermés. Ses parents le menèrent à un médecin qui promit de lui rendre la vue en lui ouvrant les yeux. 20

'Tu auras peut-être un peu à souffrir, dit-il à l'enfant, mais ensuite tu seras récompensé; tu verras tout ce que nous voyons, la lumière du soleil et les fleurs de la terre.'

L'enfant ne voulait pas; in pleurait, il préférait rester aveugle : 'Qu'ai-je besoin, disait-il, de connaître des choses dont je n'ai point l'idée?'

(b) Dans la salle d'école, pendant que les enfants étudiaient, les yeux fixés sur leurs livres, le maître les regardait.

Il regardait ces jeunes visages attentifs, ces têtes blondes penchées pour le travail, et voici ce qu'il pensait tout bas :

'Enfants, vous êtes ma jeune famille, ma famille d'adoption, qui tous les ans se renouvelle; rassemblés aujourd'hui autour de moi, vous vous disperserez pour la plupart, à la fin de l'année. Mais de près ou de loin, mon cœur vous suivra.'

(c) Dans la soirée, un nouveau personnage entra dans le salon. 20

—Bonjour, mon oncle ! s'écria Paul en lui sautant au cou,

C'était le vieux marin qui avait si bien appris à Paul comment on récolte le café.

—Bonjour, étourdi ! répondit-il. Vas-tu me demander ce soir encore de te raconter des histoires?

—Oui, certainement, dirent tous les enfants à la fois : nous aimons les récits de vos voyages sur mer.

—Eh bien, après le thé, je vous raconterai quelque chose.

L'heure du thé arriva. On apporta sur un plateau la théière entourée de biscuits. La vue de ce nouveau régal et la perspective des histoires racontées par l'oncle ranimèrent la gaieté des écoliers en vacances.

Paper-Setter—DR. P. D. BRAGANCA CUNHA

## TRANSLATION FROM PORTUGUESE INTO ENGLISH

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following passages :—

(a) Depois deste facto, a tia Margarida convidava Magno a passar os serões com ela e Tora, em vez de ir para cima com os outros aprendizes. Isto proporcionou-lhe o período mais feliz de toda a sua vida. 20

Tora tocava guitarra, enquanto Margarida fazia intermináveis meias, e para encontrar pretexto que justificasse a sua presença, Magno começou a aprender flauta. A música não estava na natureza de Magno, mas ele continuava a soprar e a tirar do instrumento uns sons de tal modo agudos, que lembravam um comboio expresso atravessando um túnel ventilado.

E, quando ele soprava com toda a força dos pulmões até perder o fôlego, Tora, inerte e paciente, esperava que ele enxugasse a suor da testa.

(b) A maneira por que um homem se serve do dinheiro, ganha-o, 20  
economiza-o e gasta-o, é talvez a pedra de toque da cordura do seu procedimento. Comquanto não devamos considerar o dinheiro como um fim de nossa vida, contudo muito longe está ele de ser uma coisa indiferente ou a que possamos votar desde um philosophico, pois que representa, e em muito subido gráo, os primeiros elementos do conforto physico e do bem estar social. Alguns das mais bellas qualidades da natureza humana acham-se intimamente ligadas ao bom uso que se pode fazer do dinheiro. Tais são a generosidade, a honradez, a justiça e a abnegação; taes são também as virtudes practicas da economia e da previdencia.

(c) O governo de uma nação nada mais e de ordinario do que a 20  
imagem e o reflexo dos individuos que a compoem. Todo governo que quizer caminhar tomando a dianteira ao povo será inevitavelmente forçado a retrogradar; todo governo que pretender deixar-se ficar atraz sera inevitavelmente compelido a avançar. Assim como a agua acha o seu nivel, assim também qualquer nação achará infallivelmente em suas leis e em seu governo as disposições que convem ao seu caracter.

## FIRST PAPER—PART (B)

### ESSAYS, GRAMMAR, AND COMPOSITION

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay on one of the following :— 15

- (a) Your daily life.
- (b) Any Indian lady who has made her mark in history.
- (c) Description of the most exciting football match you have seen.

2. Write an essay on one of the following :— 15

- (a) Duty towards neighbours.

[Hints : Mutual helpfulness is the basis of human society—ties of common interest—the advantages of friendliness among neighbours—the penalties of mutual neglect or hostility—the means of developing neighbourly feelings.]

- (b) The seasons in Bengal.

[Hints : The names of the seasons and their duration—effects on the health of man—vegetables and fruits of different seasons—changes in natural scenery—games, amusements, and festivities.]

3. Correct the errors in any four of the following sentences :—

8

(a) Human nature is more or less the same in India as well as in Europe.

(b) There is nothing to complain in his treatment of his servants.

(c) I sat under the feet of many distinguished teachers.

(d) He was hung for murder.

(e) I asked him why is he so annoyed upon me.

(f) He returned at his village walking with his foot.

4. (a) Recast the following short sentences into one long sentence with subordinate clauses :—

4

Most of the languages of Europe are derived from one common tongue. The people using this tongue are called Aryan or Indo European. They lived probably south of the Baltic sea.

(b) Rewrite the following paragraph, using the indirect form of narration :—

8

One day Peter said to his neighbour, 'Farmer George, I am sorry to tell you that John steals your apples. Several people have told me that they saw him take away a cart-load the other day.' 'I should never have thought that of John,' said Farmer George, 'but he shall be punished if there is law in this country. Who saw him stealing my apples?' 'Several people, I tell you; among others Mr. Cox,' said Peter.

5. Either, Form sentences to illustrate the use of any four of the following pairs of words :—*popular, popular; official, official; corps, corps; credulity, credibility; affection, affectation; imperious, imperial.*

10

Or, Punctuate the following passage and rewrite it :—

10

Nothing amused Sydney Smith more than to observe the utter want of humour in some minds Mrs. Jackson called one day and spoke of the oppressive heat of the previous week heat madam he said it was so dreadful here that there was nothing left for it but to take off my flesh and sit in my bones take off your flesh oh Mr. Smith how could you do that she exclaimed with the utmost gravity nothing more easy madam come and see next time but she ordered her carriage evidently thinking it an unorthodox proceeding.

## SECOND PAPER

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„ NALININATH GHOSH, M.A.
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„ JANARANJAN LAHIRI, M.A.
„ SASIPADA SAHA
„ DIGINDRACHANDRA DATTA

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Explain with reference to the context any one extract from Group A and any two extracts from Group B :— 18

#### GROUP A

(Any one)

(a) It were shame and scandal that such a man, the mirror of knight-hood, and the praise of all France, a more valiant warrior than Hector of Troy or Arthur of Britain, should be put to death before the people.

(b) 'Show me the way to that tower!' Was Huon's eager reply.

(c) 'Said I not well? Thy imprudence is too strong for good counsel.'

'Nay, friendly enchanter, the imprudence is thine, to let me know this danger that may be sought and overcome.'

### GROUP B

(Any TWO)

(a) Ev'n virtue's selfe by knaves is made

A cloak to carry on the trade;  
And power (when lodged in their possession)  
Grows tyranny, and rank oppression.

(b) Away went Gilpin—who but he?

His fame soon spread around;  
'He carries weight, he rides a race!  
'Tis for a thousand pounds!'

(c) The sleek-skinned mothers of the sharp-horned herds

Now for the barefoot milking-ma'dens lowed;  
While from the freshness of his blue abode,  
Glad his death-bearing arrows to forget,  
The broad sun blazed, nor scattered plagues as yet.

2. *Either*, Sketch briefly the story of the friendship between W. II. 12  
Hudson and the dog whom he calls 'My friend Jack.'

Or, 'In friendship and war, none were more renowned than Ronald and Oliver.' Narrate their first encounter so as to explain how this friendship was formed.

3. *Either*,

'At the dead of night, a sweet Vision I saw  
And thrice ere the morning I dreamed it again.'

Who is the speaker? Under what circumstances did he see the Vision? Describe the Vision as he saw it.

Or,

'Made happy that the foe the Prize hath won,  
She weeps glad tears for all her glory done.'

Who is the foe? What is the 'Prize' that he has won? Give an account of the contest at which he has won it. Why does she weep *glad* tears at her own defeat?

4. Explain any *four* of the following :—press-gang; it did one's heart 8  
good to see him; to break barracks; to make up a full muster; a pious fiction; our enemies have had the will of us.

5. Give in your own words the substance of *one* of the following 25  
passages :

(a) Habits of idleness once firmly fixed cannot be suddenly thrown off. The man who has wasted the precious hours of life's seed-time finds that he cannot reap a harvest in life's autumn. Lost wealth may be replaced by industry, lost knowledge by study, lost health by temperance or medicine; but lost time is gone for ever. In the long list of excuses for the neglect of duty, there is none which drops oftener from men's lips, or which is founded on more of self-delusion, than the want of leisure. People are always cheating themselves with the idea that they would do this or that desirable thing 'if only they had time.' It is thus that the lazy and the selfish excuse themselves from a thousand things which conscience dictates to be done. Remember that the men who have done the

most for their own and the general good are not the wealthy, leisarely people, who have abundance of time to themselves and nothing to do. They are the men, who are in ceaseless activity from January to December—men, however pressed with business, are always found capable of doing *a little more*. You may rely on them in their busiest season with ten times more assurance than on idle men.

(b) Learn one passage of real excellence, whether of prose or of verse, by heart and beauty after beauty will reveal itself in chosen phrase or happy music or noble suggestion, otherwise undreamed of. How much in such an extract that you really did feel admirable and lovely on a first reading, passes away, if you do not give it a further and much better reading!—passes away utterly, like a sweet sound or an image on the lake, which the first breath of wind dispels. If you could only fix that image, as the photographers do theirs, so beautifully, so perfectly! And you can do so. Learn it by heart and it is yours for ever! Noble extracts, once so reduced into possession and rendered truly our own, may be to us a daily pleasure—better, far better than a whole library *un-used*. They come to us in our dull moments, to refresh us as with spring flowers; in our selfish musings to win us by pure delight from the tyranny of foolish castle-buildings and mean anxieties. They may be with us in the workshop, in the crowded street and by the fireside;—noble friends and companions, never intrusive, ever at hand, coming at our call.

6. Tell in your own words the story contained in the following poem; 20 + 5 and bring out its moral :—

Unarmed and unattended walks the Czar  
Through the Moscow's busy street one winter day.  
The crowd uncover as his face they see :  
'God greet the Czar!' they say.

Along his path there moved a funeral,  
Grave spectacle of poverty and woe—  
A wretched sledge, dragged by one weary man  
Slowly across the snow,  
And on the sledge, blown by the winter wind,  
Lay a poor coffin, very rude and bare;  
And he who drew it bent before his load  
With dull and sullen air.

The emperor stopped, and beckoned to the man.  
'Who is't thou bearest to the grave?' he said;  
'Only a soldier, sire!' the short reply—  
'Only a soldier dead.'

'Only a soldier!' musing, said the Czar :  
'Only a Russian who was poor and brave.  
Move on; I follow. Such an one goes not  
Unhonoured to his grave.'

He bent his head, and silent raised his cap;  
The Czar of all the Russias, pacing slow,  
Followed the coffin as again it went  
Slowly across the snow.

The passers of the street, all wondering,  
Looked on that sight, then followed silently :  
Peasant and prince, and artisan and clerk,  
All in one company.

Still as they went, the crowd grew ever more,  
Till thousands stood around the friendless grave,  
Led by that princely heart, who, royal, true,  
Honoured the poor and brave.

*sledge : carriage drawn over the snow.*



## MATHEMATICS

## COMPULSORY PAPER

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 „ SARATCHANDRA RUDRA, M.A.  
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Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Either, Simplify 7

$$\frac{3\frac{1}{2} + 2\frac{7}{11}}{4\frac{7}{15} - 1\frac{1}{2}} \div \frac{5}{11 + \frac{5}{8 + \frac{5}{2}}} - 4\frac{5}{7}.$$

- Or, Find the value of 7

$$\frac{0.52}{0.15\frac{1}{2}} \div \frac{26.26}{4.90\frac{1}{2}} + \frac{2}{3 \cdot \frac{1}{1 + 1 - 0.3}}.$$

2. Either, Find the G. C. M. of 253512 and 568512. 7

Or, Find the L. C. M. of 24, 35, 52, 60, 91, 108. 7

3. Either, (i) Divide 0.2605 by 0.714285 and obtain the result correct to four decimal places. 7

(ii) A greyhound pursues a hare and takes 4 leaps for every 5 leaps of the hare, but 3 leaps of the hound are equal to 4 of the hare; compare the speeds of hound and hare. 9

Or, (i) Find by Practice or otherwise the value of 7 mds. 5 srs. 2 chs. of clarified butter at Rs. 56. 14 as. per md. 7

(ii) A person finds that a fall of interest from 4 to  $3\frac{1}{2}$  per cent. per annum diminishes his yearly income by Rs. 60. What is his capital? 9

4. Either, (i) Simplify

$$\frac{a-2x}{a+2x} - \frac{a+2x}{a-2x} + \frac{8ax}{a^2+4x^2}.$$

- (ii) Show that 5

$$-x^3 - y^3 - z^3 + (x+y+z)^3 = 3(x+y)(y+z)(z+x).$$

Or, (i) Divide  $a^3+b^3-c^3+3abc$  by  $a+b-c$ . 5

(ii) Solve the equation 5

$$0.5x + \frac{0.02x + 0.07}{0.03} - \frac{x+2}{9} = 9.5.$$

5. Either, (i) Find the H. C. F. of  $x^3-5x-2$  and  $2x^3-5x^2+1$ . 5

(ii) Find the L. C. M. of  $x^2-1$ ,  $x^2+3x+2$ , and  $x^2+x-2$ . 5

Or, Resolve into factors :

(i)  $m^4+m^2n^2+n^4$ ; 5

(ii)  $a^2(b+c)+b^2(c+a)+c^2(a+b)+2abc$ . 5

6. With the same axes of coordinates draw the graphs of (i)  $3x-2y=0$ , 10  
(ii)  $y-3=0$ , and (iii)  $2x-y=1$ .

7. Either, (i) Show that in a right-angled triangle the square on the hypotenuse is equal to the sum of the squares on the other two sides. 10

(ii) Prove that in an equilateral triangle four times the square on the perpendicular drawn from a vertex on the opposite side is equal to three times the square on any side. 5

Or, (i) Show that in an obtuse-angled triangle the square on the side subtending the obtuse angle is greater than the sum of the squares on the other two sides by twice the rectangle contained by one of those sides and the projection of the other side upon it. 10

(ii) Prove that a triangle whose sides are 2, 3, and 4 inches is an obtuse-angled triangle. 5

8. Either, (i) Show that equal chords of a circle are equidistant from the centre. 10

(ii) Find the locus of the mid-points of chords of constant length in a circle. 5

Or, (i) Show that there is only one circle which passes through three given points not in a straight line. 10

(ii) Prove that two different circles cannot cut each other at more than two points. 5

9. (i) Describe a parallelogram equal in area to a given triangle and having one of its angles equal to a given angle. (Traces only are required.) 5

(ii) Construct a rhombus equal in area to a given rectangle and having a side equal to a side of the rectangle. (Traces only are required.) 5

## ADDITIONAL PAPER

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		„ S. M. ATIAH RAHAMAN, M.A., B.T.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. (i) *Either*, Find the nearest value of  $\sqrt{0.3}$  to three places of decimals.

*Or*, A number of boys raised Rs. 9 by subscription among themselves. Each boy contributed the same number of *annas* as the number of boys. Find each boy's contribution.

(ii) A room is 12 ft. long, 8 ft. broad, and 10 ft. high. Find the cost of white-washing the four walls of the room, leaving out two doors each measuring 6 ft. high and 4 ft. wide, and four windows each measuring ft. high and 3 ft. wide, if the rate is 3 pies per sq. ft.

2. (i) Either, Find the nearest value of

6

$$1 + \frac{1}{1 \times 7} + \frac{1}{2 \times 7^2} + \frac{1}{3 \times 7^3} + \dots$$

to four places of decimals.

Or, The distance between two places is given as 18 kilometres. Express the distance in miles and yards. (1 metre = 39.37 inches.)

6

(ii) A cistern has a supply-pipe which can fill it in 3 hours and also a waste-pipe which can empty it in 4 hours. If both pipes are opened when the cistern is empty, in what time will the cistern be filled?

5

3. A rupee weighs 1 tola and contains 11 parts by weight of silver and 1 part of alloy. If silver may be bought in the market at the rate of Rs. 55 per 100 tolas and if the cost of a quantity of the alloy is  $\frac{1}{10}$  of the cost of an equal quantity of silver, find the exact cost of the metal of the rupee in annas and pies.

8

4. Either, (i) Solve  $3x^2 - 10x + 3 = 0$ .

(ii) The area of a rectangular plot of land fenced all round is 2,000 sq. yds. and the total length of fencing is 180 yds. Obtain a quadratic equation to determine the length of the plot.

5

Or, (i) Multiply  $x^{\frac{1}{2}} + x^{-\frac{1}{2}} + 1$  by  $x^{\frac{1}{2}} + x^{-\frac{1}{2}} - 1$ .

5

(ii) Find the square root of

5

$$x^4 - 1x^3y + 18x^2y^2 - 28xy^3 + 49y^4.$$

5. Either, (i) Find the sum of  $n$  terms of a G.P., given the first term and the common ratio.

4

(ii) Sum to infinity

6

$$\frac{1}{3} + \frac{1}{7} + \frac{1}{3^2} + \frac{1}{7^2} + \frac{1}{3^3} + \frac{1}{7^3} + \dots$$

Or, (i) Find the sum of  $n$  terms of A.P., given the first term and the common difference.

4

(ii) Sum to  $n$  terms

6

$$1 \times 2 + 2 \times 3 + 3 \times 4 + 4 \times 5 + \dots$$

6. With the same axes of coordinates draw the graphs of (i)  $x^2 = y - 2$ , and (ii)  $y = 3x$ , and find by measurement the coordinates of the points of intersection.

10

7. (i) Prove that a straight line drawn from the centre of a circle at right angles to a chord bisects it.

6

(ii) A goat is tied by a length of rope to a peg on the ground so that the goat can at most reach a distance  $l$  from the peg. If the peg is at a distance  $d$  ( $< l$ ) from a straight row of plants, show that the goat can feed off a length of the row equal to  $2\sqrt{l^2 - d^2}$ .

6

8. Either, (i) Construct (with proof) an isosceles triangle having each of the angles at the base double the vertical angle.

10

(ii) Construct an angle equal to a fifth part of a right angle. (Traces only are required)

4

Or, Show how a circle may be constructed to touch a given circle and to pass through two given points outside it. State two possible cases.

14

9. *Either*, (i) Prove that in any triangle the sum of the squares on the two sides is equal to twice the square on the median together with twice the square on half the base. 7

(ii) Show that three times the sum of the squares on the sides of a triangle is equal to four times the sum of the squares on the medians. 7

Or, (i) Enunciate and prove the geometrical theorem corresponding to the algebraic identity  $(a-b)(a+b)=a^2-b^2$ . 7

(ii) Show that the rectangle contained by the two segments into which a given straight line may be divided cannot exceed the square on half the line. 7

## SANSKRIT

### COMPULSORY PAPER

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Examiners— (contd.)	PANDIT UPENDRANATH VIDYARATNA
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	PANDIT SURENDRAMOHAN BHATTACHARYYA.
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	MR. SRUTINATH CHAKRABARTI, B.A., B.T.
	PANDIT AKSHAYKUMAR SASTRI
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	„ HRISHIKES BHATTACHARYYA.
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	MR. PRAMADACHARAN BANDYOPADHYAY, M.A.
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	„ JANAKIBALLABH BHATTACHARYYA, M.A.
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	(To look over answer-papers written in MARATHI character)
	MAHAMAHOPADHYAY PANDIT SITARAM SASTRI
	(To look over answer-papers written in MALAYALAM character)
	MR. ANANTAKRISHNA SASTRI
	(To look over answer papers written in GUJARATHI character)
	MR. HARGOVIND DAS SEIH.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any five of the following :—

5 × 5 = 25.

(a) स च प्रणिपत्यैनं पुनरपि प्रसाद्य जाम्बवतीं नाम कन्यां  
गृहागमनार्थंभूतां ग्राहयामास, स्वमन्तकमणिमप्यसौ प्रणिपत्य तस्मै  
प्रददौ ।

(b) क्रियता कालेन विष्णुस्वामिनि मृते, ते चत्वारः प्राणरक्षार्थं  
मातुलाख्यमगमन् । मातुलोऽपि तान् दरिद्रानवलोक्य न सम्भावयामास ।

(c) ततो विभवक्षयादपमान-परम्परया परं विषादं गतः, राक्षौ सुसञ्चितवान्—अहो धिगिमां दरिद्रताम् ।

(d) अद्यप्रभृति मम छत्तच्छायायां सर्वैरपि श्वापदैर्वर्तितव्यम् ; अहं ककुदृद्रुमो नाम श्वापदराजः तैलोक्ये सञ्जातः ।

(e) स च नत्वाह—देवादेशः प्रमाणम्, तथापि भवच्छालनात् किमपि वक्तुकामोऽस्मि, ततः सापराधमपि मे वचः क्षन्तव्यम् ।

(f) शशकोऽब्रवीत्—देव ! आगच्छन् पथि सिंहान्तरेण बलाद्धृतः, तस्याग्रे पुनरागमनाय शपथं कृत्वा स्वामिनं निवेदयितुमन्तागतः ।

(g) अथ तं हर-गल-गरल-समप्रभमपूर्वं सत्त्वमवलोक्य ते सर्वे भयव्याकुलमनसः समन्तात् पलायनक्रियां कुर्वन्ति ।

Explain the *sumāsas* in the underlined words in (f) and (g); account for the case-endings in बलात् in (f), कालेन in (b), दरिद्रतां in (c), and वचः in (e); how do you account for the different genders in देवादेशः and प्रमाणम्? Derive सुस in (c) and सञ्जात in (d).  $3+4+1+2=10$

2. Explain in English with reference to the context either (a) and (d) 10 or (b) and (c) :—

(a) स विनिश्चित्य बहुधा विचार्य च पुनः पुनः ।

उत्सर्गं मन्यते श्रेयो दमयन्त्या नराधिप !

(b) स कैश्चिन्निकृतिप्रज्ञै रनार्यैरकृतात्मभिः ।

देवने कुशलोर्जिह्वै र्जितो राज्यं वसूनि च ॥

(c) अवसज्य शिलां कण्ठे समुद्रं तत्तुमिच्छसि ।

सूर्याचन्द्रमसौ चोभौ पाणिभ्यां हत्तुमिच्छसि ॥

(d) मद्भ्यात्तः परित्यज्य स्वमधिष्ठानमृद्धिमत् ।

कैलासं पर्वतश्रेष्ठमध्यास्ते नरवाहनः ॥

Account for the case-endings in दमयन्त्या in (a) and देवने in (b) and सूर्याचन्द्रमसौ in (c); what form will the word परित्यज्य in (d) take if परि be elided? Account for आ in सूर्याचन्द्रमसौ in (c); derive विनिश्चित्य in (a) and तत्तुम् in (c).  $3+1+1+2=7$

3. (a) न काचस्य कृते जातु युक्ता मुक्तामणेः क्षतिः ।

न चाप्यहं गमिष्यामि कथां कुलकलङ्किताम् ॥

Who is the speaker of the above *śloka*? To whom it is addressed?



(b) Give *either* in English or in Sanskrit the story अश्वत्कुलशीलो बन्धुः from the हितोपदेशः । 6

4. (a) Decline *either* the base विद्स् in the genitive ( षष्ठी ) or the base युष्मद् in the ablative ( पञ्चमी ). 3+3+3=9

(b) Conjugate *either* the root हन् in लोट् second person or the root जन् in लिट् third person.

(c) Apply the rules of *sandhi* in any *three* of the following :—

हसन् + चकार ; पुनः + रमते ; द्वाः + एषा ; निन्दति + एनम् ;  
and अहो + अपूर्वम् ।

5. Translate into Sanskrit any *five* of the following :—

25

(a) Every year terrible famine occurs in this country, and a good many men die for want of food.

(b) A beautiful girl was playing on the bank of a river, and she found a stag carried away by the stream of that river.

(c) He was able to do good to others as he required very little money for his simple life.

(d) In spite of all his troubles, he did not give up his studies, and thus pleased his parents much.

(e) 'I will become famous', replied the boy, who certainly was ambitious and expected to do great things.

(f) The people of his own neighbourhood could not understand him and turned everything he did to ridicule.

(g) He brought joy and delight to thousands by his unflinching courage and cheerfulness.

6. Correct any *three* of the following :—

6

(a) वर्षायां पथः पिच्छिलो भवति ।

(b) सर्वे प्रजाः राजं प्रणमन्ति ।

(c) आसीत् तस्य नरपतेः चत्वारः कन्यकाः ।

(d) प्राते परिभ्रमणम् मां रोचते ।

ADDITIONAL PAPER

*Head-Examiner*—DEBENDRANATH RAY, M.A.

<i>Examiners—</i>	SM. SURAMA MITRA, M.A.
	MR. SACHINDRANATH BANERJEE, M.A.
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	„ ASOKNATH BHATTACHARYYA, M.A.
	„ SATISCHANDRA BHATTACHARYYA, M.A.
	„ MANMATHANATH BHATTACHARYYA, M.A.
	„ RASAMAY BANERJEE, M.A.
	„ RASAMAY CHATTERJEE, M.A.
	„ ASUTOSH BISWAS, M.A.
	„ KALIRANJAN MUKHERJEE, M.A.
	„ HARIPADA CHAKRABARTI, M.A.
	„ PRABHATKUMAR MUKHERJEE, M.A.
	„ MOHINIMOHAN RAY, M.A.
	„ RAMENDRAMOHAN BASU, M.A.
	„ SRINATH CHAKRABARTI, M.A.
	„ JNANESWAR BHATTACHARYYA, M.A.
	„ BHABATARAN CHAKRABARTI, M.A.
	„ DAKSHINARAJAN SASTRI, M.A.
	„ DINESCHANDRA BHATTACHARYYA, M.A.
	„ SURENDRAPRASAD NAYAK, M.A.
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	„ DURGACHARAN CHATTERJEE, M.A.
	„ PRATIKCHANDRA BHATTACHARYYA, M.A.
	„ DHIRENDRANATH BHATTACHARYYA, M.A.
	„ HARENDRAKUMAR CHAKRABARTI, M.A.
	PANDIT MAHENDRACHANDRA BHATTACHARYYA
	MR. TARAPADA BHATTACHARYYA, M.A.
	„ BHUPATICHARAN CHAKRABARTI
	„ SURESCHANDRA SEN, M.A.
	„ BANBHARI BHATTACHARYYA, M.A.
	„ GOPALKRISHNA BHATTACHARYYA, M.A.
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	(To look over answer-papers written in MALAYALAM character)
	MM. VEDANTAVISARAD ANANTA KRISHNA SASTRI

Examiners— (contd.)	{	(To look over answer-papers written in MARATHI character)
		MM. PANDIT SITARAM SASTRI
	{	(To look over answer-papers written in GUJARATHI character)
	{	MR. HARGOBIND DAS SETH

*Candidates are required 'to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Narrate briefly in English the story of Jīmūtavāhana. 10
2. Translate into English any two of the following :—  $5 \times 2 = 10$

(a) न यस्य चेष्टितं विद्यान् कुलं न पराक्रमम् ।

न तस्मिन् विश्वसेत् प्राज्ञो यदीच्छेच्छि यमात्मनः ॥

(b) यन्न भावि न तद्भावि, भावि चेन्न तदन्यथा ।

इति चिन्ताविषमोऽयमगदः किं न पीयते ॥

(c) अप्रगल्भस्य या विद्या, कृपणस्य च यद्धनम् ।

यच्च बाहुबलं भीरोर्व्यर्थमेतत्तथ्यं भुवि ॥

3. Translate into English any two of the following pieces :—  $15 \times 2 = 30$

(a) कस्मिंश्चिद् वनोद्देशे चटकदम्पती तमालतरु-कृतनीडौ प्रतिवसतः, अथ तयोर्गच्छता कालेन सन्ततिरभवत् । अन्यस्मिन्नहनि प्रमत्तो वनगजः कश्चित् तं तमालवृक्षं घर्मातश्छायाथार्थी समाश्रितः । ततो मदोत्कर्षात् तां तस्य शाखां चटकाक्रान्तां पुष्कराग्रेणाकृष्य बभञ्ज, तस्या भङ्गेन चटकाण्डानि सर्वाणि विशीर्णानि, आयुःशेषतया च चटका कथमपि प्राणैर्न वियुक्ता । अथ सा अण्डभङ्गाभिभूता प्रलापान् कुर्वाणा न किञ्चित् सुखमाससाद ।

(b) अस्ति ब्रह्मारण्ये कर्पूरतिलको नाम हस्ती । तमवलोक्य सर्वे शृङ्खालाश्चिन्तयन्ति स्म—यद्ययं केनाप्युपायेन स्त्रियेत, तदास्माकमेतद्देहेन मासचतुष्टयस्य भोजनं भविष्यति । ततस्तन्मध्यादेकेन वृद्धशृङ्गालेन प्रतिज्ञा कृता—मया बुद्धिप्रभावादस्य मरणं साधयितव्यम् । अनन्तरं स वञ्चकः कर्पूरतिलक-संनिधानं गत्वा साष्टाङ्गपातं प्रणम्योवाच—देव, दृष्टिप्रसादं कुरु । हस्ती व्रूते—कस्त्वम् ? कुतः समायातः ?

(c) अस्ति कस्मिंश्चिद्भूभागे शोभावती नामार्धवती नगरी । तस्यां च शूद्रको नाम कश्चित्प्राज्यविक्रमो नृपतिर्बभूव । कदाचित् तं महीपालं प्रियदर्शं मालवेभ्यः कश्चिद् वीरवरो नाम द्विजः समुपययौ । तस्य धर्मवती नाम भार्या, सत्त्ववरो नाम सुतः, वीरवती नाम कन्या चेति त्रयं गृहपरिच्छदः । तावन्मात्रपरिवारो वीरवरस्तस्माद्राजः प्रत्यहं दीनारशतपञ्चकं

श्रुत्ये प्रार्थयामास । शूद्रकोऽपि वीक्ष्य तमाकारसूचितोदारपौरुषं यथेप्सितं तस्मै ददौ ।

4. (a) Join by the rules of *sandhi* (सन्धि) any three of the following :— 3

महा + ऋषिः ; याचेते + अर्थम् ; एतत् + मुरारिः ; महान् + लाभः ;  
अग्नि + स्तोमः ।

(b) Give the feminine forms of any three of the following :— 3

मृडु ; आचार्य ; यवन ; कृशोदर ; चन्द्रमुख ।

(c) State the various ways in which either तृतीया विभक्ति or पञ्चमी विभक्ति is used. 6

(d) Name and dissolve any three of the following compounds (समास) :— 3

किंराजा ; विभुवनम् ; स्त्रीसभम् ; देवब्राह्मणः ; चित्तगुः ।

5. (a) State what forms of what roots the following are (select any five):— 5

वेद ; दोग्धु ; जगम् ; अमृमुचत् ; आसामासयुः ; अकृत ; सुषुप्सति ।

(b) Give the locative singular of वृत्तहन् ; the nominative dual of अहन् ; the dative singular of पथिन् ; the genitive plural of पुमस् ; the ablative singular of सर्व (feminine); the dative dual of युष्मद् ; and the locative plural of सुगन्. (Select any five.). 5

6. Translate into Sanskrit any five of the following :— 5 × 5 = 25

(a) His father, when alive, strove to teach him his trade, but could not succeed; and since his father's death he does nothing but idle away his time in the streets.

(b) Now the shepherd's mother was very old, so feeble that she could do nothing. In the morning the shepherd said to one of them, ' You stay here and take care of my mother, while I am out'.

(c) A Brahman had two sons and a daughter. The latter had been married and lived not far from her father's home. In course of time, the wife of the Brahman fell ill and died.

(d) Once upon a time, seven men left their native place and set out to seek their fortunes. On the evening of the first day of their journey, they sat down under a tree to rest.

(e) A certain part of a village was once inhabited by weavers. One day a young weaver girl was doing the work of the house, and, as she worked, she said to herself.

(f) King Mahāsena, having got together an army, went to attack his enemy Vikramāsakti. And that king, as soon as he heard of his approach, came out to fight.

## PĀLI

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## COMPULSORY AND ADDITIONAL

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## COMPULSORY PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any *two* of the following extracts, commenting fully upon the words italicized :— 15

(a) So tam' netvā saram' dassetvā varanarukkhabhinukkho pāyāsi. Kakkafako āha : " mānula, ayañ saro etto, tvañ pana ito nesī " ti. Bako " piyamātulasako atibhagimputto si me tvañ " ti vatvā " tvañ ' esa mañ ukkhipitvā vicaranto mayham' dāso ' ti saññam' karosi maññe, pass' etam' varanarukkhamūle kaṇṭakarasam', yathā me te sabbam' accchā khādītā tam' pi tath' eva khādīsāmo ' ti āha.

(b) So " dubbalo esa bhavissati, māressāmi nan " ti sattim' ādāya anubandhi. Bodhisatto nātidūre nāccāsanne gacchanto tam' ādāya araññam' pāvīsi, dūram' gatabhāvam' itvā padam' cañceti āññena maggena vātaveg' na gantvā siṅgena pesibbakam' ukkhipitvā bhūmīyam' pātetvā phāletvā kacchapam' nihari. Satapatto pi rukkhā otari.

(c) Corāpi suriye attham' gate brāhmaṇam' ban' itvā nipaṭṭhesum'. Tam' khaṇam' yeva pācinalohadhātuto paripunnam' candamāṇḍalam' utthahi. Brāhmaṇo nakkhattam' olokeno " dhanavassāpuka-nakkhattayogo laddho, kim me dukkheṇa anubhūtena, matum' parivattetvā satanavassam' vassāpetvā corānam' dhamm' datvā yathāsukham' gamissāmi " ti cintetvā core āmanesi : " bho corā, tumhe mañ kimatthāya gaphitthā " ti.

2. Summarize in English EITHER the *Kuranga naga-jātaka* OR the *Valāhasa-jātaka*. 8

3. (a) Write notes on any *four* of the following :—*Pāveru*, *Bharukaccha*, *Tambapañṇi*, *Jetavana*, *Acenarati*, *Jambudipa*, *Cetiyaṛaṭṭha*, and *Videharaṭṭha*. 4

(b) Explain fully the term *Bodhisatta*. What do you understand by the name *Brahmadatta* occurring in almost all *Jātaka* stories? 4

4. Translate into English any *two* of the following stanzas, adding grammatical notes on the words italicized :— 10

(a) *Handa*, Buddhakara dhamme vicināmi ito c'ito |  
Uddham' adbo dasadisa jāvatā dhammadhātuyā ||

- (b) *Bāhusaccañ ca sippañ ca vinayo ca susikkhito !*  
*Subhāsita ca yā vācā etañ mangalamuttamañ ||*  
 (c) *Asādhāranamaññesañ acoraharaṇo nidhi !*  
*Kayiratha dhiro puññāni, yo nidhi anugāmiko ||*

5. Either, State and explain the *Buddhakara-dhammas*, referred to in the *Buddharaṇsa*. 9

Or, Elucidate the central idea of the *Ratana Sutta*.

6. Make necessary corrections in any four of the following :— 2 × 4 = 8

- (a) *Tarā paṇā aṭṭimukhe kassati.*  
 (b) *Catuppadā sihañ rājāñ akaṇṇsu.*  
 (c) *Bharu rājā namo rājāñ kāresi.*  
 (d) *Idaṇ Satthā upākañ paṭṭhāya kathesi.*  
 (e) *Mama saddhūñ āgamehi.*

7. (a) Join, according to the rules of Sandhi, any two of the following :—*pana-etan, ut-etan, sacc ahañ, and tatha-eva.* 2

(b) Disjoin the Sandhi in any two of the following :—*tyāhañ, yāradeva, tathariva, and tyatthu.* 2

(c) Decline fully the base of EITHER *Satthā* OR *rañño.* 3

(d) Conjugate the roots of EITHER *thapesi* OR *ahesuñ* in the present tense. 2

(e) Expound the samāsa in any two of the following :—*piṭṭhapa-sāno, cintanakabaku, lākhāparikkhamkatā, and dūṣāpāmekkho.* 2

(f) Frame sentences to illustrate the use of any three of the following :—*sacc, ma, namo, kacci, and vya.* 2 × 3 = 6

8. Translate into Pāli any five of the following passages :— 5 × 5 = 25

(a) Have you ever been to Benares? Do you know anything about Sarnath?

(b) Asoka was a virtuous king. He looked upon his subjects even as his own children.

(c) He had great veneration not only for Buddha Sākyamuni but also for some of the previous Buddhas.

(d) He did great things for Buddhism and for his people.

(e) Asoka's monuments are coming to light day by day. Their number is already large.

(f) They show how great he was and how noble his royal example.

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following :—

10

(a) " *Tiṭṭha tāv'etassa imasmiñ rājābhisekakāle evarūpañ mukhañ, kuḍḍhesa kīḍisañ bhavissati, iminā hi kuḍḍhena olokitaṃ mayaṃ tatta-kapāle pakkhittatīlā viya tattha tatth'eva bhijjissāma.* "

(b) Bodhisatto nātidūre nācāssanne gacchanto taṃ ādāya araṇṇiṃ pāvīsi, dūraṃ gatebbhāvaṃ natvā padaṃ vaṇicetvā sūññaṃ maggena vātavagena gantvā siṅgena pasibbakaṃ ukkhipitvā bhūmiyaṃ pātetvā phāletvā kacchapaṃ nīhari.

(c) Tāva sunibhito santo gambhīre odakantike na sabbo sabbadā eva tassa taṃ uṇakappati, Nidhi vā ṭhānā cavati, Saññā vā'ssa vimuṇhanti, Nāgā vā apanāmenti, yakkhā vāpi haranti naṃ, Appiye vāpi dāyādā uddharanti apassato, yadā puñṇakkhayaṃ hoti Sabbametaṃ vinassati.

2. (a) Name and expound the *samāsas* in *Rājābhisekakāle*. 2
- (b) Account for the 3rd case-endings in *maggena* and *vātavagena* 2
- in 1 (b).
- (c) Derive *pātetvā* and conjugate its root in aorist 3rd person 2
- singular.
- (d) Either, Give in your own words, in English, an account of 4
- Sumedha's meeting with Dīpaṅkara.

Or, Summarize the teachings contained in the *Maṅgala-Sutta*.

3. (a) Either, Name the different ways in which the past idea can 6
- be expressed in Pāli, and give an example of each.

Or, Name the different kinds of participles that are found in Pāli, and explain their formations.

(b) How are desideratives formed in Pāli? Give the desideratives 2+3

of any three of the following roots :—*paṭh* (to read), *kar* (to do), *bhuj* (to eat), *gam* (to go), and *han* (to kill).

(c) How are comparatives and superlatives formed in Pāli? 2+6

Give the comparatives and superlatives of any three of the following :—*appo*, *vuḍḍho*, *dūro*, *antiko*, and *sādhu*.

(d) Frame simple sentences in Pāli to illustrate the use of any 6

three of the following indeclinables :—*raho*, *nuna*, *kira*, *alaṃ*, *addhā*, and *saddhim*.

4. Translate into English any three of the following extracts :— 30

(a) Rañño Paṇḍavo nāma asso, tassa Giridanto nāma assabandho, so khañño ahoṣi. Asso mukharajjuke gahetvā taṃ purato purato gacchantāṃ dievā "maṃ eso sikkhāpeti" ti saññāya anusikkhanto khañño ahoṣi. Tassa khañjabhāvaṃ rañño ārocesi. Rājā vejje pesesi.

(b) Te gantvā assassa sarīre rogaṃ apassantā "rogaṃ assana passāma" ti rañño kathaṃvīsu. Rājā Bodhisattaṃ pesesi : "gaccha vayasā ettha kāraṇaṃ jānāhi" ti. So gantvā khañjassabandhaṃsaggena tassa khañjabhāvaṃ natvā rañño taṃ atthaṃ ārocesi.

(c) Atīte Bodhisatto ekasmiṃ duggatakūle nibbatti. Tassa vayasappattassa piṭṭhā kālāṃ akāsi. So bhatīṃ katvā mātaraṃ posesi. Atha'ssa mātā ekam kuladhītarāṃ gehe katvā aparabhāge kālāṃ akāsi. Bhariyāya pi'ssa kucchiyaṃ gabbho paṭiṭṭhāsi. So pabbajitukāmo ahoṣi.

(d) Sā aparabhāge puttāṃ vijāyi. Tassā vijātakāle so āha : "bhadda tvaṃ sotthinā vijātā, idānaṃ pabbajissāmi" ti. Atha naṃ sā āha "puttassa tava thanapānato apagamanakāle gamissasi" ti. So tassā anācikkhitvā rattibhāge uṭṭhāya palāyi.

(e) Tadā kāsiraṭṭhe dubbhikkhaṃ ahoṣi. Kākā yebhnyena araṇṇiṃ pavasiṃsu. Eko Bārāṇasīvāsi kākō kākīm ādāya araṇṇiṃ gantvā ekam saraṃ niessāya vāsam kappesi. So ekadivasam tasmīṃ sare gaccharaṃ gāḥantaṃ vīrakaṃ nāma ekam udakakākaṃ passi.

5. Translate into Pāli any *three* of the following :—

25

(a) He went and having saluted at his feet took his alms-bowl from his hand and said : " Sir ! the king wants to see you."

(b) The hermit said : " The king does not know me." Thereupon the man said : " Sir ! kindly wait here till I come back." He agreed and stood there.

(c) The king came down from the palace and went to the place where the hermit was standing and requested him to come to his house.

(d) The ascetic was pleased with his conduct and accompanied him to the palace. There the king placed him on the throne and served him with food.

## ARABIC

### COMPULSORY PAPER

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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any *two* of the following :—

A

11

لَا يَلْفُ قَرِيشَ - إِيْلَفُهُمْ رَحْلَةَ الشِّتَاءِ وَالصَّيْفِ - فَلْيَعْبُدُوا  
رَبَّ هَذَا الْبَيْتِ - الَّذِي أَطْعَمَهُمْ مِنْ جُوعٍ - وَأَمَّنَهُمْ مِنْ خَوْفٍ \*

B

11

اللَّهُ لَا إِلَهَ إِلَّا هُوَ - الْحَيُّ الْقَيُّومُ - لَا تَأْخُذُهُ سِنَّةٌ وَلَا نَوْمٌ - لَهُ  
مَا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ - مَنْ ذَا الَّذِي يَشْفَعُ عِنْدَهُ إِلَّا



بأذنه - يعلم ما بين أيديهم وما خلفهم - ولا يحيطون بشيء من علمه إلا بما شاء - وسع كرسيه السموت والأرض ولا يؤده حفظهما وهو العلي العظيم \*

C

11

على بن ابي طالب أول من آمن - وشهد الغزوات كلها  
الغزوة تبرك - ولما قتل عثمان بايعه الناس بالعجاز وامتنع  
من بيعته معارضة وأهل الشام شيعة بني أمية غضبا منهم لقتل  
عثمان وقلة عنايته بالبحث عن معرفة القاتل على حسب  
اعتقادهم - فظهر من ذلك الفتنة العظمى بين المسلمين و  
انفراقهم إلى طائفتين فحاربوا مدة حتى قتل أحد الخوارج عليا  
خدعة بمسجد الكوفة \*

2. Answer any three of the following :—

15

(a) Rewrite the extract 1. C with vowel-points.

(b) Give the opposite number of any five of the following :—

- معرفة - بحث - كرسي - أرض - سموت - شيء - فتم  
رب and طائفة

(c) Mention the صيغة of the following :—

يحيطون and يؤد - يدخلون

(d) Form imperatives (أمر حاضر معروف) from ينصر - تأخذ  
يظهر and يجلس

(e) Define أفعال اليقين and form sentences with them.

(f) Name four أسماء الأفعال and make sentences with them.

3. Translate into English the extract (a) and either (b) or (c) :—

(a) أفضل قسم الله للمرء عقله 12

فليس من الخيرات شيء يقاربه  
يعيش الفتى بالعقل في الناس إنه  
على العقل يجري علمه وتجاربه

يشين الفتى في الناس قلة عقله  
 و إن كرمتم اعراقة و مناسبه  
 اذا اكمل الرحمن للمرء عقله  
 فقد كملت اخلاقه و مآربه

10 (b) قال حكيم ينبغي للمرء ان لا يفرح بمرتبة ترقاها بغير عقل  
 و بمنزلة رفيعة كسبها بغير فضل - قيل ان رجلا تكلم بين يدي  
 الخليفة المأمون فاحسن فقال له المأمون ابن من انت فقال  
 ابن الادب يا امير المؤمنين فقال نعم النسب و لله در من قال

شعر

كن ابن من شئت و اكتسب ادبا  
 يغنيك محمودة عن النسب  
 ان الفتى من يقول ها انا ذا  
 ليس الفتى من يقول كان ابي

10 (c) يقال ان انوشيروان ركب في بعض الايام في الربيع على  
 سبيل الفرجة فجلس يسير في الرياض المخضرة و يشاهد الشجرة  
 الثمرة و ينظر الى الكروم الف مرة - فنزل عن فرسه شكراً لربه و خر  
 ساجدا راضعا خده على التراب - فلما رفع راسه قال لاصحابه ان  
 خصب السنين من الملوك و السلاطين و حسن نيتهم و احسانهم  
 الى رعيّتهم - فالمدة لله الذي قد اظهر حسن نيتنا في سائر  
 الاشياء \*

4. Either, Reproduce the story of المرأة المفقدة 6  
 Or, Narrate what Ibn Baṭūṭa says of China.  
 5. Correct and rewrite with vowel-points :— 10

(a) كَانَ زَيْدٌ غَنِيًّا

(b) لَنْ نُشْرِكَ بِاللَّهِ أَحَدًا

مَرَرْتُ بِأَبُو عَبْدِ اللَّهِ (c)

جَاءَ فِي إِثْنَانِ عَشْرَةَ رَجُلٍ (d)

نَعَمْ الرَّجُلُ عَمُرٌ (e)

6. Translate into Arabic :—

25

- (a) Ahmad has a sister and a brother.
- (b) His father was a poor man but now he has become rich.
- (c) Five hundred men went to see that holy man.
- (d) If you go there, convey my salutation to him.
- (e) Know that Allāh is with us wherever we may go.
- (f) He who does a good deed will be rewarded.
- (g) I have never seen a wicked man like him.
- (h) Why do you say what you will not do?
- (i) Surely hypocrites will not go to Paradise.
- (j) These books have become very old.

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate either A or B into English :—

12

A

قِيلَ لَقَيْسُ بْنُ سَعْدٍ هَلْ رَأَيْتَ قَطَ إِسْخَى مِنْكَ - قَالَ نَعَمْ  
نَزَلْنَا بِالْبَادِيَةِ عَلَى امْرَأَةٍ فَحَضَرَ زَوْجَهَا فَقَالَتْ إِنَّهُ نَزَلَ بِكَ ضَيْفَانِ  
فَجَاءَ بِنَاقَةٍ فَنَحَرَهَا وَ قَالَ شَانِكُمْ - فَلَمَّا جَاءَ الْغَدُ جَاءَ بِأُخْرَى وَ  
نَحَرَهَا وَ قَالَ شَانِكُمْ - فَقُلْتُ مَا أَكَلْنَا مِنَ الَّتِي نَحَرْتُ الْبَارِحَةَ إِلَّا  
الْيَسِيرَ فَقَالَ إِنِّي لَا أَطْعَمُ إِضْيَانِي الْغَابَ - فَاقْمَنَا عِنْدَهُ إِيَّامًا وَ  
السَّمَاءُ تَمْطُرُ وَ هُوَ يَفْعَلُ كَذَلِكَ فَلَمَّا أَرَدْنَا الرِّحِيلَ رَضَعْنَا فِي بَيْتِهِ  
مِائَةَ دِينَارٍ وَ قُلْنَا لِلْمَرْأَةِ اعْتَذِرِي لَنَا مِنْهُ وَ مَضَيْنَا - فَلَمَّا ارْتَفَعَ النَّهَارُ  
إِذَا رَجُلٌ يَصِيحُ خَلْفَنَا قَفُوا إِلَيْهَا الرِّكْتَ اللَّثَامَ اعْطَيْتُمُونَا ثَمَنَ الْقَرْيِ  
لَتَأْخُذْنَهَا وَ لَا طَعْنَتَكُمْ بِرَمْعِي فَاخْذُنَا وَ انْصَرَفْنَا \*

## B

(a) إذا جاء نصر الله و الفتح ۞ رأيت الناس يدخلون في دين الله أفواجا ۞ فسبح بحمد ربك و استغفره ۞ إنه كان توابا ۞

(b) كن ابن من شئت و اكتسب  
يغنيك محمودة عن النسب  
ان الفتى من يقول ها انا ذا  
ليس الفتى من يقول كان ابي

2. Either relate the story of رجل و ابن عرس or describe the conversation between ابر دلامه and the Caliph السفاح 8

3. Translate the following into English :—

30

(a) قيل ان بعض البخلاء استأذن عليه ضيف و بين يديه خبز و قدح فيه عسل فرفع الخبز و اراد ان يرفع العسل و ظن البخيل ان ضيفه لا يأكل العسل بلا خبز فقال ترى ان تأكل العسل بلا خبز - قال نعم \*

(b) حكى ان رجلا اشترى غلاما فقال يا مولاي اريد منك ثلث شروط احدها ان لا تمنعني عن الصلوة اذا دخل رقتي و الثاني ان تستخدمني بالنهار و لا تشغلني بالليل و الثالث ان تجعل لي بيتا لا يدخله احد غيري فقال له لك ذلك فانظر الى هذه البيوت فطاف بها حتى رأى بيتا خرابا فاختره \*

4. Answer any three of the following :—

25

(a) Give إعراب to extract B in Question I.

(b) Correct any four of the following :—

السَاءَةُ كَمْ - صَلَبَ الْمُتَجَسِّمِ - يَا أَوْلَادِ لَا تُدْخِلْ - نَحْنُ بَيْنَ

يَدِهِ - يَا صَاحِبَ الْبَيْتِ - هُوَ كَتَبَ صُعْبَةً - الْمُعَلِّمُونَ صَالِحُونَ \*

( ) Conjugate the verb **كسر** in the form of **إنفعال** in **ماضى** and **اكرم** in the form of **إنفعال** in **مضارع**

(e) Enumerate the **الافعال الناقصة** and describe their functions with examples.

(d) Define **المنادى** and give its **إعراب**.

5. Translate any *ten* of the following sentences in Arabic :—

25

- (a) We wish to stay in the city.
- (b) We stayed long in Egypt.
- (c) The doors of the house are open.
- (d) It is said that Saladin was a powerful sultan.
- (e) His name is mentioned for his courage.
- (f) This news is known to us.
- (g) See! what have you done, O boys?
- (h) Open the door, O girls!
- (i) They heard your speech and did not understand it.
- (j) Yes, we are friends.
- (k) Have you written your letters?
- (l) He has not come to-day.

## PERSIAN

### COMPULSORY PAPER

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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into simple English one of the following passages :—

12

A

کسی دید در خواب صدر خچند  
که خاری ز پای یتیمی بکند  
همی گفت و در روزها می چمید  
کزان خار بر من چه گلهامید  
مشورتا توانی ز رحمت بری  
که رحمت کنند چو رحمت بری  
چو انعام کردی مشورت خود پرست  
که من سرورم دیگری زیردست  
چو بینی دعاگوی دولت هزار  
خداوندرا شکر نعمت گذار  
که چشم از تو دارند مردم بسی  
نه تو چشم داری بدست کسی

B

نمودم سوال از قوی پنجه  
چه پیش آمدت کاینچنین رنجه  
ترا دیده بودم ازین پیشتر  
زبون بود در پنجه ات شیرنر  
چه شد چیردستی و کرد و فرت  
که اکنون فرو خفته در گل خرت  
بدینگونه زرد و نزاری کنون  
که چون کاه از کهربائی زبون  
لکدکوب از پیش کرده تفت  
چه شد زرد بازاری پیل انکنت

بگفتا که از گردش روزگار  
مگر نیستی آگه ای هوشیار

2. Give a short account of the life of the author of extract B of Question 1. 8

3. Explain one of the following :— 10

A

یاران که بوده اند ندانم کجا. شدند  
یا رب چه روز شد که از ما جدا شدند  
گر نو بهار آید و پرسد ز درستان  
گو ای صبا که آن همه کلهای گدا شدند  
ای گل چو آمدی ز زمین کو چگونه اند  
آن رویها که در ته گردد فنا شدند

B

مردۀ صد سالرا حی می کند  
این بجز حق دیگر کی می کند  
از زمین خشک رویانده گیاه  
آسمان را بی ستون دارد نگاه  
هیچ کس در ملک او انباز نی  
قول او را لحسن نی آراز نی

4. Answer any four of the following :— 20

(a) Give the meanings and Arabic opposite number of—

منت - بیوت - مصالح - تدبیر - نعمت

(b) Give rules for the formation of the aorist مضارع in Persian.

(c) Give the uses of the letter “ی” or “ل”, with examples.

(d) Mention the kinds of اضافت in the following :—

عصای کلیم - شب توبه - غریب نواز - رز شگار - سعد زنگی

(e) Form sentences with the following suffixes :—

بان - دام - من - دار - دار

5. Translate into English any two of the following passages :—

16

A

حجاج را گفتند که از خدای تعالی بترس - و بر مسلمانان ظلم مکن - بمنبر برآمد ری بغایت فصیح بود - گفت - خدای تعالی مرا بر شما مسلط کرده است - اگر من بمیرم شما بعد از من از ظلم نخواهید رست باین فعل که شماراست - خدای تعالی را جز من بندگان بسیاریند - اگر من بمیرم یکی بدتر از من بر شما کمارد \*

B

دو امیرزاده بودند در مصر - یکی علم آموخت و دیگری مال اندوخت - این علامه عصر شد و آن عزیز مصر - پس توانگر بچشم حقارت در آن درویش نظر کرد - و گفت - من بسلطنت رسیدم و تو همچنان در مسکنت بماندی گفت - ای برادر - شکر باری تعالی مرا می باید گفتن گفتن که میراث پیغمبران یافتم یعنی علم - و تو میراث فرعون - یعنی ملک مصر \*

C

عمر و لیث صفار را غلامی بود - در حالت مستی امیر را دشنام داد - امیر بزندانش فرستاد - چون بهوش آمد بعقوبتش فرمان داد - غلام گفت - ای امیر - من بد کردم در حالتی که بیهوش بودم - تو در حالتی که هوش داری بد مکن - این سخن امیر را خوش آمد و از عقوبتش درگذشت و انعامی وافر با خلعتی فاخر بار عطا نمود \*

6. Either, Write short notes on—

9

عمر و لیث صفار and حجاج - عزیز مصر

Or, Correct the following :—

من دیروز از بنارس خواهیم آمد - ده درخت آلبا بردند - فردا ماه حطم شد - شخص مرده شد -



## 7. Translate into Persian :—

25

Morning is the best time for work. Early rising is useful for health. It makes a man healthy. Knowledge is power, and we must try to acquire it. It is always good to be honest. Everybody likes an honest man. Books are our true friends. We should keep company with them.

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## 1. . Translate into English one of the following :—

12

## A

درویشی را پرسیدند که راحت دنیا در چه دانی - گفت در در  
چیز - اول توشه که از رحمت خلقم باز دارد - دوم گوشه که از زحمت  
خلقم بی نیاز گرداند - گفتند اگر از قبول یکی ازین در مختار شوی  
کدام یک را اختیار کنی - گفت قبول گوشه کنم و ترک توشه زیرا  
که زهر گرسنگی چشیدن بهتر است از منت جماعتی کشیدن :—

در سرای خویشتن مردن ز جوع  
به که سوی ناکسان کردن رجوع  
آنکه هر روزش رسد روزی ز غیب  
عیب باشد گر شود راضی بعیب

## B

شنیدم که خسرو بشیرویه گفت  
در آندم که چشمش زدیدن بخفت  
بران باش تا هر چه نیت کنی  
نظر در صلاح رعیت کنی  
میچ ای پسر گردان از عقل درای  
که مردم ز دستت نه بپزند پای

گریزد رعیت ز بیداد گر  
 کند نام زشتش به گیتی سمر  
 بسی بر نیامد که بنیاد خود  
 بکند آن که بنهاد بنیاد بد  
 خرابی کند مرد شمشیر زن  
 نه چندانکه درد دل طفل ر زن

2. *Either*, Give a short account of the life of خسرو.

8

*Or*, Give an account of the author of extract A.

3. Translate into English :—

30

شیری در غاری خفته بود ناگاه مرشی از سوراخ بیرون آمد  
 و بر روی بدن شیر دوید و ار را از خواب بیدار ساخت - شیر بخشم  
 تمام برخاست و مرش را در زیر پنجه خود در آورد و خواست بکشد  
 درین حالت مرش التماس نمود و زاری کرد گفت که اگر جان مرا  
 به بخشی در عوض این مهربانی روزی ترا خدمت کنم - شیر ازین  
 گفته او تبسم کرد و رها نمود و گفت تو بچه کار من خواهی آمد -  
 چندی نگذشت که شیر دام صیادان افتاد و در آن حالت بنای  
 بیقراری گذاشته غریب شدن گرفت - موش آواز شیر را شنیده در نزد  
 او رفت و ار را در دام بلا گرفتار دید - با دندانهای کوچک خود  
 بندهای دام را شروع کرد به بریدن تا اینکه پاره شد شیر از آن قید  
 بسته تشکر ار را بجا آورد موش گفت ای بادشاه حیوانات گاهی  
 بخیال تو این مطلب نمیرسد که چگونه یک موش کوچکی بکار  
 تو خواهد خورد

اسکندر روزی بر دیوانه گذر کرد گفت ای دیوانه از من  
 چیزی بخوار دیوانه گفت مگسان اذیتم میدهند حکم کن که ندهند -  
 سلطان گفت ای دیوانه از من چیزی طلب کن که در اختیار من  
 باشد - دیوانه گفت مگسان که عاجزترین مخلوق اند اگر در اختیار تو  
 نیستند پس از تو چه خواهم \*

4. Answer any *three* of the following :—

15

(a) Give the opposite numbers of the following with their meanings :—

عزالم - طبائع - سنه - عامه - روابط

(b) Express in Persian—*He has been there. He used to say. You may go. He must come. He had seen him.*

(c) What is اسم فاعل ? How is it formed ? Give examples.

(d) Explain the formation of the following :—

شبستان - دادگر - ماهتاب - گلزار - مشعل چى

5. Translate into Persian :—

35

Yesterday morning I went to see a friend. He was not at home. His old father was there and called me in and asked me to take my seat. He said that his son had gone close by and would return soon. The house of my friend was very nice and was situated by the side of a small stream. It had a beautiful garden inside, with nice flowers and fruit trees. After a short time my friend came and was glad to see me there. We went out and sat by the side of the stream and talked for some hours.

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## CLASSICAL ARMENIAN

*Paper-Setter & Examiner—MR. ZEBEDU HANANIAN*

## COMPULSORY PAPER

*Candidates are required to give their answers in their own words  
as far as practicable**The figures in the margin indicate full marks*

1. Translate into English :—

30

Ստեալ խոսուի շրջեր ընդ Երեւոյ: և ահա այր մի  
անուն կոչեցեալ Ալաքէոս, և նա էր մաքսապետ և ինքն  
մեծատուն, և խնդրէր տեսանել թէ ովքիցէ խոսու, և ոչ  
կարէր ի բազմութենէն, զի կարճ էր հասակաւ: Եւ  
ընթացեալ յառաջս ել ի ժանտաթզենին, զի տեսանիցէ զնա,  
քանզի ընդ այն իսկ անցանելոց էր: Եւ իբրև եկն ի  
տեղին: Հայեցաւ ի վեր խոսու և ասէ զնա: Ալաքէ,  
փութա եջ պտի զի պսօր ի տան քում արժան է ինձ  
ապանել:

2. Հոլովեալ :—

7

Բան, գառն, ոսկր, գիւղ, այր, իմ, օր:

3. Խոնարհեալ :—

10

Սիրիմ, սիրեմ, հատանեմ, ըմպեմ, ջեռուցանեմ:

4. Սերլուծեալ :—

10

Ինն առնուլ կամ աչառել ընաւ ամենեւին ոչ  
գիտեր.

5. Correct the following :—

8

Տեառն առաջի տրտնջէր չարաչար ժողովուրդն, և  
տէր յուաւ և բարեաղաւ սրտօրդութեամբ:

6. Translate into Classical Armenian :—

35

Until recent years our knowledge of ancient Egyptian history was derived from the works of the Greek historian, Herodotus of Halicarnassus, who wrote in the fifth century B.C., and of the learned Egyptian Manetho, of whose records, compiled some two centuries after Herodotus, only an epitome survives. Both derived their information from the priests, who were the depositories of Egyptian learning in their day. Apart from misinterpretations of the ancient monuments of which modern study has given more accurate renderings, the story told by Herodotus, and still more by Manetho, corresponds with no wider diversity than might have been expected to the really contemporary records of the ancient monuments. To their story have to be added the fragments of Hebrew tradition.

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

30

Ինդրեմք ի քէն արքայ քաջ, ունին դիր սակաւ բանից  
մերոց, և քաղցրութեամբ լուր զոր ասելոցս եմք : Վանքի  
յիշեցուցանեմք քեզ զժամանակն Շապհոյ արքայից  
արքայի, որ էր հայր հաւուն քո ճաղկերտի. և ետ նմա  
Նստուած զերկիրն Հայոց ի ժառանգութիւն սովին օրինօք,  
որով և մէք իսկ վարիմք պշտմ, և հարքն մեր և հաւքն  
հարցն մերոց կացին նմա ի ծառայութեան վաստակս. և  
սիրով կատարէին զպմենայն հրաման բանի նորա. և բազում  
անգամ ի նմանէ մեծապարգեւք լինէին :

2. Give the meanings of the following words in English :—

10

Երանանք, օժանդակ, գեղանի, տաղանդ,  
արեւսասագետ, գծագրող, ջատագով, ջլատում, յուղիչ,  
ինքնակալ :

3. Define in Armenian the following grammatical terms :—

20

Ղեկօքական բայ, եական բայ, շաղկապ, մակբայ,  
գերանուն ածական :

4. Parse (ի յերևութեւ) :—

10

Ինչգեւ խաղաղութեան պատեալ էր զամենայն :

5. Translate into Modern Armenian :—

30

The idle and selfish man cares little for the rest of the world. He does nothing to help the forlorn or the destitute. 'What are they to me?' he says; 'let them look after themselves. Why should I help them? They have done nothing for me. They are suffering? There always will be suffering in the world. What can't be cured must be endured. It will be all the same a hundred years hence.' He is so much engrossed by his own idleness, that he will give no heed to the pressing claims of others. The discussions about poverty, ignorance, or suffering, annoy him. 'Let them work,' he says, 'why should I keep them? Let them help themselves.'

CLASSICAL TIBETAN

*Paper-Setter & Examiner*—DR. SATKARI MUKHERJEE, M.A., PH.D.

COMPULSORY PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passages into English :—

40

(a) ཡང་དག་སྤོང་དག་ཐོན་ཏུང་བ་འདས་པའི་དུས་ན་ནགས་ཚལ་ཞིག་ན། མིང་  
གི་ཐུ་གུ་དང་བཅས་པ་ཞིག་དང་། ལྷག་མོ་ཐུ་གུ་དང་བཅས་པ་ཞིག་འདུག་ལྟེ། མིང་གི་མོ་  
སྤྱོད་ཡུལ་དུ་སོང་བ་དང་། དེའི་ཐུ་གུ་དེ་འབྱམས་པ་ན་ལྷག་མོའི་གན་དུ་སོང་ནས། ལྷག་མོས་  
དེ་མཐོང་ནས་འདི་བསད་པར་བྱའོ་སྟེ་སྟུག་ནས། ཡང་བསམས་པ་འདི་བདག་གི་བྱའི་ཆུང་པོ་  
གོགས་སུ་འབྱར་གྱི་མ་བསད་དོ་སྟུག་ནས། དེས་དེ་ལ་རྒྱ་མ་བསྟན་པར་བརྟམས་སོ། ། མིང་གི་  
མོ་དེས་ཀྱང་སྤྱོད་ཡུལ་བརྟམས་དེ་ཕྱིར་འོང་བ་དང་ཇི་ཅམ་ན་ཐུ་གུ་མི་སྟངས་ནས་དེས་དེ་བཅའ་  
བར་བརྟམས་པ་དང་། དེས་ཐུ་གུ་ལྷག་མོས་བསྟན་པ་མཐོང་ངོ་། ལྷག་མོ་དེས་ཀྱང་མིང་གི་  
མོ་དེ་མཐོང་ནས། སྟག་ལྟེ་འབྲོས་པར་བརྟམས་པ་དང་། མིང་གི་མོ་དེས་ལྷག་མོ་ལ་སྟུག་པ།  
རྒྱ་མོ་མ་འབྲོས་ཞིག་དང་། རྒྱ་མོ་ལ་འཁོད་པར་བྱ་ལྟེ། འདི་ལྟར་ཁྱོད་མོ་སྤྱོད་ཡུལ་དུ་སོང་ན་  
ཁྱོད་ཀྱིས་ཁོ་མོའི་ཐུ་གུ་ལ་མཁོ་བ་བལྟམས་པས། གཤ་དེ་ཁྱོད་སྤྱོད་ཡུལ་དུ་འགྲོ་བར་འབྱར་  
ན། ཁོ་མོས་ཀྱང་ཁྱོད་ཀྱི་ཐུ་གུ་ལ་བལྟམས་པར་བྱའོ།

2. Give a brief account of the story alluded to in either 1(b) or 1(c).

10

(b) ཐུ་གུ་དང་ཐུ་མོ་གྲོག་པར་བྱེད།

ཐུན་པའི་རང་ན་མདུན་དུ་འགྲོ།

ཡང་འདི་གནས་སུ་ཚད་ཀྱང་རིག།

དེག་འཚོས་ན་ཡང་བདག་ལས་ལྟོན།

(c) བསགས་པར་ཡང་ནི་བྱ་བ་ལྟེ། རྒྱག་པ་བསགས་པར་མི་བྱའོ། མོགས་པ་  
ཚོགས་པའི་ཁྱ་མོང་བ། གཞུ་ལོས་བསད་པར་གྱར་ལ་ལྟོས།

3. Correct the errors in the following :—

10

(a) རྒྱ་པོ་རྣམས་ལ་ང་འི་དཀར་པོ་གཤོར་བྱ་འགྲོའི་ཅེས་བྱང་ལ།

(b) གཞུལ་བར་སྒྲ་བྱའི་འཁོར་པས་དེ་རྣམས་ཀྱི་སྒྲ་དང་བཞན་གངས་ཡང་བྱངས་  
བཞུག་པོ་བྱེད་པ་ཐམས་ཅད།

4. Write a short explanatory comment on the following verse :—

10

མི་ཡི་ཚེས་ཕྱགས་ལེགས་སྤྱད་ན།

ལྷ་ཡུལ་བཞོད་པ་ཐག་མི་རིང་།

ལྷ་དང་མི་ཡི་ཐེས་སྒྲས་ལ།

འཛོགས་ན་ཐར་བའང་གས་ན་འདྲག།

5. Translate *either* of the following extracts into classical Tibetan :—

30

(a) Consequently the shepherd boy left the mountains and came to the court. There he distinguished himself not only by his wisdom, but also by his modesty. But his unselfishness distinguished him most among the courtiers; for he was always ready to help others. He was poor, but nevertheless he would not be rewarded for his help. Thus he grew up at the court, and most men loved him. The king too loved him dearly and afterwards made him his treasurer and honoured him with a title.

(b) This plan was agreed to by all, and the robbers were soon ready. In parties of two and three they got into the town without their character or purpose being suspected, and the captain and the men who had visited the town in the morning came in last.

—

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following extracts into English :—

40

(a) ཁོད་བསམ་པ་ལ་ངན་སེམས་མི་ཤེས་པའི་ཐུགས་ཅད་མཁྱེན་པ་གལ་ཡོང་  
བསམ་པའི་ཆེ། བཅོམ་ལྷན་འདས་ཀྱི་ཞབས་གཡས་བཞག་པས་མེད་དོ་དེ་པདྨའི་འཛིང་  
བྱར་གྱུར་བའི་དཀྱིལ་པད་སྤོང་པདྨའི་ཁྲི་ལྷེང་དུ་བཞུགས་པས། ཁོར་བ་དུ་དད་པ་སྦྱེས་ཏེ་ཕྱག་  
འཚལ་མཆི་ས་འདོན། བདག་སྤོངས་པའི་ཁར། སྦྱིག་ཅན་གྲོགས་ཀྱི་ཁ་ལ་ཉན། ཟས་རྣམས་  
དུག་གི་སྦྱགས་ནས་མེད་ཅེས་འབྱོར་པ་དུག་པོས་ཞུས་པར། དཔལ་སྦྱས་ཁྱོད་ཡི་ཕྱག་མ་བྱེད་  
ཅིག། དགེ་སྤོང་རྣམས་ཀྱང་ཉན་ཅིག་སྤྲོད་པར་ཤ་སྲིར་གྱུ་པོ་ཆངས་བྱིན་ཞེས་པར་སྦྱོག་དང་  
འདྲ་བའི་བཅུན་མོ་དཔེ་མེད་མ་བྱ་བ་ཡོད་དེ་གོང་ཁྱེད་གྱི་མཐའ་ན་ནགས་ཚལ་ཞིག་ནང་མ་  
བྱའི་གྱུ་པོ་གསེར་སྤྲང་བྱ་བར་སྦྱེས་དུས། སྤྲང་སྤྲང་པ་སྤྲིང་བྱ་པུ་ལྷུང་ལྷུང་བཅུན་མོས་  
ཐོས་ནས། གྱུ་པོ་ལ་ཅི་ཡིན་ཞུས་པས་མ་བྱ་གསེར་སྤྲང་གི་སྤྲང་ཡིན་ཚུལ་སོགས་ལོ་གྱུས་  
བཤད་པར། བྱ་དེ་འཛིན་དགོས་ཞུས་གྱུ་པོ་བྱད་མེད་ཀྱི་ཁར་དབང་མེད་དུ་སོང་ནས། དོན་  
མེད་པའི་བྱ་བ་ཚོས་པ་འབངས་རྣམས་ལ་བྱ་བ་སྤྲུང་ཏེ་མ་བྱ་ཅིན་ན་དང་། མ་ཅིན་ན་ཁྱེད་  
རང་གསོད་དོ་ཅེར།

(b) རབ་དུ་བྱགས་པས་འབྱོམ་བྱ།

བདག་ཉིད་ཀྱིས་ནི་མངོན་སུམ་བྱ།

ཐུག་བརྒྱུར་ལྷུང་ཙམ་སྒྲ་ཡིས།

རི་དྲགས་ཐལ་ཆེར་བྲོས་ལ་ལྷོས།

2. Narrate in your words the story alluded to in the extract (b), 10  
Question 1.



3. Fully explain the purport of the following extract with reference to the context :— 10

བདག་ནི་འདི་ན་ལྷོ་བས་ལྷན་བཅོལ་འགྲུལ་པར།།

ཕྱོད་ག་དང་མཚུངས་པ་ག་ལ་ཡང་མེད་དེ།།

སྒྲིང་ཆེན་ཀྱལ་པོ་ཇིང་ལ་བབ་པ་བཞིན།།

དེ་རིང་རྒྱན་གོར་སྒྲོད་བརྒྱད་གཞིས་པར་བྱ།།

4. Conjugate any three of the following roots in the past, present and future tenses :— 10

(a) གཙོད་པ; (b) འཛུགས; (c) འཚག; (d) འཇུག;

(e) ལུབ་།

5. Correct the errors in the following :— 6

བཅས་པར་བྱ་ཅིང་བྱང་པར་བྱ། མངས་གས་བལྟན་ལ་བརྒྱུག་པར་བྱ།

6. Translate the following passage into Classical Tibetan :— 20

One day Ali Baba was in the forest and had nearly finished cutting as much wood as his asses could carry, when he saw, in the distance, a thick cloud of dust which seemed to be coming in the direction in which he was. He soon made out a large body of horsemen, who were advancing at a very quick pace. Ali Baba rightly guessed that these people were robbers; and so, without caring as to what might become of the asses, he climbed up a tall tree which grew near by, and hid himself in the midst of a thick cluster of leaves and branches. From this position of safety he could observe all that was going on below without being detected himself.

## LATIN

### COMPULSORY PAPER

*Paper-Setter*—MR. W. C. WORDSWORTH, M.A.

*Examiners*—{MR. NALINIMOHAN CHATTERJEE, M.A.  
,, NIRMALCHANDRA MITRA, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*Translate :—*

(a) Postquam id animum advertit, copias suas Caesar in proximum collem subducit, equitatumque, qui sustineret hostium impetum, misit. Ipse interim in colle medio triplicem aciem instruxit legionum quatuor

veteranarum, ita ut supra se in summo ingo duas legiones, quas in Gallia citiore proxime conscripserat, et omnia auxilia collocaret: ac totum montem hominibus compleri, et interea sarcinas in unum locum conferri, et eum ab his, qui in superiore acie constiterant, muniri iussit. Helvetii, cum omnibus suis carris secuti, impedimenta in unum locum contulerunt: ipsi, confertissima acie relecto nostro equitatu, phalange facta, sub primam nostram aciem successerunt.

(b) Ariovistus ad postulate Caesaris pauca respondit: de suis virtutibus multa praedicavit: Transisse Rhenum sese, non sua sponte, sed rogatum et arcessitum a Gallis; non sine magna spe magnisque praemiis domum propinquosque reliquissae; sedes habere in Gallia ab ipsis concessas; obsides ipsorum voluntate datos; stipendium capere iure belli, quod victores victis imponere consuerint: non sese Gallis, sed Gallos sibi bellum intulisse; omnes Galliae civitates ad se oppugnandum venisse, ac contra se castra habuisse; eas omnes copias a se uno proelio fusas ac superatas esse; si iterum experiri velint, se iterum paratum esse decertare; si pace uti velint, iniquum esse de stipendio recusare, quod sua voluntate ad id tempus dependerint.

2. Account for the subjunctive mood in *sustineret, collocaret* in 1 (a); 7  
and in *consuerint, dependerint* in 1 (b).

Give the genitive singular and genitive plural of—*obses, pax, civitas, ius, ipse, is, spes, legio*.

3. Write brief notes on:—Ariovistus, Dumnorix, Cisalpine Gaul, 6  
Suebi, Aedui, legion.

What was Caesar doing in Gaul at this time?

4. Translate:— 12

(a) O socii (nequo enim ignari sumus ante malorum),  
o passi graviores, dabit deus his quoque finem.  
vos et Scyllaeam rabiem penitusque sonantis  
accestis scopulos, vos et Cyclopa saxa  
experti: revocate animos, maestumque timorem  
mittite: forsan et haec olim meminisse iuvabit.  
per varios casus, per tot discrimina rerum  
tendimus in Latium, sedes ubi fata quietas  
ostendunt: illic fas regna resurgere Troiae.  
durate, et vosmet rebus servate secundis.

(b) Est locus, Hesperiam Graei cognomine dicunt,  
terra antiqua, potens armis atque ubere glabrae;  
Oenotri coluere viri, nunc fama minores  
Italiam dixisse ducis de nomine gentem.  
hic cursus fuit,  
cum subito adsurgens fluctu nimbosus Orion  
in vada caeca tulit penitusque procacibus Austris  
perque undas superante salo, perque invia saxa  
dispulit: huc pauci vestris adnavimus oris.  
quod genus hoc hominum?

5. *Parae* (in 4 (a))—*passi, sonantis, revocate, forsan, meminisse, rerum, fas, resurgere* 6

Give the principal parts of the verbs.

6. Write short notes on:—*Parcae, Aeolus, Cyclopa saxa, Cytherea, 7*  
*Saturnia arva, gemini Triones, Penates*.

8. Translate:— 25

(a) Caesar, exposito exercitu et loco castris idoneo capto, ubi ex captivis cognovit, quo in loco hostium copiae consedisent, cohortitus x ad mare relictis et equitibus CCC qui praesidio navibus essent, de tertia

vigilia ad hostes contendit, eo minus veritus navibus, quod in litore molli atque aperto deligatas ad anchoram relinquebat : et praesidio navibus Q. Atrium praefecit

(b) His cognitis rebus, rem frumentariam providet, castris idoneum locum deligit. Ubiis imperat, ut pecora deducant suaeque omnia ex agris in oppida conferant, sperans barbaros atque imperitos, homines, inopia cibāriorum affictos, ad iniquam pugnandi conditionem posse deduci.

8. Translate into Latin :—

26

(a) As soon as everything was ready he ordered his army to proceed along the river bank.

(b) It is the duty of the citizen to obey the State, and not to think of himself.

(c) Caesar promised to obey the laws.

(d) They were overtaken in the valley and cut off to a man.

(e) The Senate made this promise that they might have time to arrange for the defence of the city.

(f) He lived in Rome, his brother at Athens.

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate :—

(a) Ita ancipiti proelio diu atque acriter pugnatum est. Diutius cum nostrorum impetus sustinere non possent, alteri se, ut coeperant, in montem receperunt; alteri ad impedimenta et carros suos se contulerunt. Nam hoc toto proelio, cum ab hora septima ad vespereum pugnatum sit, aversum hostem videre nemo potuit. Ad multam noctem etiam ad impedimenta pugnatum est, propterea quod pro vallo carros obiecerant, et e loco superiore in nostros venientes tela coniciebant, et nonnulli inter carros rotasque mataras ac tragulas subiciebant nostrosque vulnerabant.

(b) Quisquis es, haud, credo, invisus caelestibus auras vitalis carpis, Tyriam qui advenis urbem.  
perge modo atque hinc te reginae ad limina perfer.  
namque tibi reduces socios classemque relatam  
nuntio et in tutum versis Aquilonibus actam,  
ni frustra augurium vani docnere parentes.  
aspice bis senos laetantis agmine cycnos,  
aetheria quos lapsa plaga Iovis ales aperto  
turbabat caelo; nunc terras ordine longo  
aut capere aut captas iam despectare videntur.  
ut reduces illi ludunt stridentibus alis  
et coetu cinxere polum cantusque dedere,  
hand aliter puppesque tuae pubesque tuorum  
aut portum tenet aut pleno subit ostia velo.

2. What is there peculiar about the verbs—*coepi, odi, meminī, inquam?*

Give the future participle (nom sing. only) of—*odi, fungor, figo, dormio.*

3. Give the meaning of—*apud, coram, de, prae, sine, palam, sub, tenus.* 5

What cases do they take?

4. Give the Latin for—down stream, when Numa was king, half the corn, he used a knife, the people of Rome, the moon moves. 5

5. Illustrate by examples the use of the two supines, and of *dum* with the subjunctive. 5

6. Translate into Latin :— 30

(a) Accordingly, putting Labienus in charge of the cavalry, he gave the signal and the whole line advanced against the hill.

(b) Let them not leave the city before dawn.

(c) The State has need of good citizens and brave soldiers.

(d) As night was approaching he thought he ought not to wait any longer.

(e) The industrious husbandman plants trees whose fruit he will never see.

(f) He was the first to announce to the populace that the army had been victorious.

(g) When everything was ready he departed from the city.

7. Translate :— 30

Britanniae pars interior ab iis incolitur, quos natos in insula ipsa memoria proditum dicunt: maritima pars ab iis, qui praedae eo belli inferendi causa ex Belgio transierant: qui omnes fere iis nominibus civitatum appellantur, quibus orti ex civitatibus eo pervenerunt, et bello illato ibi remanserunt atque agros colere coeperunt. Hominum est infinita multitudo creberrimaeque aedificia, fere Gallicis consimilia: pecorum magnus numerus. Utuntur aut aere, aut annulis ferreis ad certum pondus examinatis, pro nummo. Nascitur ibi plumbum album in mediterraneis regionibus, in maritimis ferrum; sed eius exigua est copia: aere utuntur importato. Materia cuiusque generis ut in Gallia est, praeter fagum et abietem.

materia = timber.

## FRENCH

Paper-Setter and Examiner—REV. FATHER E. POPULAIRE, S.J.

### COMPULSORY PAPER

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Translate into English three of the following extracts :— 24

(a) Les vieux béliers viennent d'abord, la corne en avant, l'air sauvage; derrière eux le gros des moutons, les mères un peu lasses, leurs nourrissons dans les pattes;—les mules à pompons rouges portant dans des paniers les agnelets d'un jour qu'elles bercent en marchant; puis les chiens tout suants, avec des langues jusqu'à terre, et deux grands coquins de bergers drapés dans des manteaux de cadis doux qui leur tombent sur les talons comme des chapes.

(b) Ah ! Gringoire, qu'elle était jolie la petite chèvre de M. Seguin ! Qu'elle était jolie avec ses yeux doux, sa barbiche de sous-officier, ses sabots noirs et luisants, ses cornes zébrées et ses longs poils blancs qui lui faisaient une houppelande ! C'était presque aussi charmant que le cabri d'Ésméralda, tu te rappelles. Gringoire ?—et puis, docile, caressante, se laissant traire sans bouger, sans mettre son pied dans l'écuelle. Un amour de petite chèvre. . . .

(c). Pendant ce temps, un drame terrible se passait à l'autre bout de la chambre, devant l'armoire. Il s'agissait d'atteindre là-haut, sur le dernier rayon, certain bocal de cerises à l'eau-de-vie qui attendait Maurice depuis dix ans et dont on voulait me faire l'ouverture. Malgré les supplications de Mamette, le vieux avait tenu à aller chercher ses cerises lui-même ; et, monté sur une chaise, au grand effroi de sa femme, il essayait d'arriver là-haut.

(d) Tout près du lac filtre une source,  
Entre deux pierres, dans un coin ;  
Allègrement l'eau prend sa course  
Comme pour s'en aller bien loin.  
Elle murmure : Oh ! quelle joie !  
Sous la terre il faisait si noir !  
Maintenant ma rive verdoie,  
Le ciel se mire à mon miroir. . . .

2. Describe briefly some peculiarities of the country, and its inhabitants, with which the *Lettres de mon Moulin* are chiefly concerned. 8

3. Translate the following idiomatic expressions:—*jurer tout bas* ; 8  
*donner la chair de poule* ; *porte à clairevoie* ; *vin du cru* ; *donc tous ses états* ;  
*au petit jour* ; *de loin en loin* ; *à perte de vue*.

4. Put— 10

(a) in the plural—*quelqu'un* ; *celui* ; *lui-même* ; *auquel*, *duquel* ;

(b) in the feminine—*Monsieur un tel est son mari*, *il est vieux*,  
*souffrant botteux*.

5. Translate into French:—

(a) (i) Each one for himself ; (ii) don't mention it ; (iii) however 14  
that may be ; (iv) my watch is slow ; (v) have you wound it up ? (vi) send  
for a cab ; (vii) leave me alone.

(b) As two friends were travelling through a wood, a bear rushed 16  
out upon them. One of the men, without thinking of his companion,  
climbed into a tree and hid among the branches. The other threw himself  
on the ground and pretended to be dead, for he had heard that bears  
will not touch a dead body. The creature came near him, but, thinking  
him to be lifeless, went away without harming him.

6. Translate into English:—

(a) L'an passé cela va sans dire  
J'étais petit ; mais à présent  
Que je sais compter, lire, écrire,  
C'est bien certain que je suis grand.  
Quand sur les genoux de ma mère  
On me voyait souvent assis,  
J'étais petit, la chose est claire ;  
J'avais cinq ans, et j'en ai six !  
Maintenant je vais à l'école ;  
J'apprends chaque jour ma leçon ;  
Le sac qui pend à mon épaule  
Dit que je suis un grand garçon.

(b) Une troupe de chameaux sans gardien encombra la rue dans toute sa largeur. En deçà et au delà de ce groupe d'animaux silencieux, il n'y avait personne. La rue déserte se remplissait paisiblement de cette ombre poudreuse et de couleur rousse, qu'on ne trouve que dans les villages arabes du sud, à la tombée de la nuit. La terrasse de la maison était occupée par un petit nombre de gens qui tous regardaient du même côté, du côté des montagnes.

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English *three* of the following extracts :—

18

(a) Dans le petit bois de chênes verts il y a des oiseaux, des violettes, et des sources sous l'herbe fine. . . . Quand ils ont aperçu M. le sous-préfet avec sa belle culotte et sa serviette en chagrin gaufré, les oiseaux ont eu peur et se sont arrêtés de chanter, les sources n'ont plus osé faire de bruit, et les violettes se sont cachées dans le gazon. . . . Tout ce petit monde-là n'a jamais vu de sous-préfet, et se demande à voix basse quel est ce beau seigneur qui se promène en culotte d'argent.

(b) La petite pièce se remplit de monde. On pose les tambourins sur les chaises, la vieille bannière dans un coin, et le vin cuit circule. Puis, quand on a vidé quelques bouteilles à la santé de M. Frédéric, qu'on a causé gravement de la fête, si la farandole sera aussi belle que l'an dernier, si les taureaux se comporteront bien, les musiciens se retirent et vont donner l'aubade chez les autres conscillers. A ce moment la mère de Mistral arrive.

(c) Quelques tables boiteuses où traînent des verres ternis par la poussière, un billard crevé qui tendait ses quatre blouses comme des sébiles, un divan jaune, un vieux comptoir, dormaient là dans une chaleur malsaine et lourde. Et des mouches ! des mouches ! jamais je n'en avais tant vu : sur le plafond, collées aux vitres, dans les verres, par grappes. . . . Quand j'ouvris la porte, ce fut un bourdonnement, un frémissément d'ailes comme si j'entrais dans une ruche.

(d) Soudain le bruit cessa, la nuit sembla moins noire.  
Et l'on criait : Victoire ! et je criai : Victoire !  
J'aperçus des clartés qui s'approchaient de nous.  
Sanglant, sur une main et sur les deux genoux  
Je me traînai ; je dis :—Voyons où nous en sommes.  
J'ajoutai :—Debout, tous ! Et je comptai mes hommes.  
—Présent ! dit le sergent.—Présent ! dit le gamin.  
Je vis mon colonel venir, l'épée en main.

2. (a) Write an appreciation of Daudet as a story-teller.

8

(b) Write short notes on *three* of the following :—*Avignon, le moulin de Jemmapes, bouillabaisse, Semillante, Les Baux.*

6

3. (a) Change the pronouns in *italics* to third person plural :—*je vous remercie beaucoup ; je vous demande bien pardon ; donnez m'en quelques-uns ; il faut qu'il m'obéisse ; nous vous disons adieu.*

5

(b) Write down the second person singular and plural of the imperative of the following verbs :—*aller, s'asseoir, prendre, savoir tenir.* 5

4. What are the principal parts of a verb in French? Show how the other tenses are formed from these parts. 8

5. Translate into French :— 30

- (a) (i) The weather was bad, and I had to wait.  
 (ii) Do not expect me before half-past ten in the morning.  
 (iii) This is what he wrote to me.  
 (iv) It was so cold that the rivers were frozen.  
 (v) We shall be glad to see you to-morrow afternoon.

(b) The house in which I was born stands in the principal street of the old town of Bedingham, near York. It is a tall white house, with very long windows. There my father lived for many years. My mother I cannot recollect, for she died when I was only two years old. I was an only child, and I used to have a good deal of liberty, for my father was very busy.

6. Translate into English :— 20

(a) *Le Merle (The Blackbird).*  
 Un oiseau siffle dans les branches  
 Et sautille gai, plein d'espoir,  
 Sur les herbes, de givre blanches,  
 En bottes jaunes, en froc noir.  
 O'est un merle, chanteur crédule  
 Ignorant du calendrier,  
 Qui rêve soleil, et module  
 L'hymne d'avril en février.  
 Lustrant son aile qu'il essuie,  
 L'oiseau persiste en sa chanson,  
 Malgré neige, brouillard et pluie  
 Il croit à la jeune saison.

(b) Si j'étais riche je n'irais pas au fond d'une province me bâtir un château, mais sur le penchant de quelque agréable colline j'aurais une petite maison rustique, une maison blanche avec des volets verts, et le toit couvert de tuiles propres et gaies qui me rappelleraient un peu le temps de ma jeunesse. J'aurais une basse-cour, une étable avec des vaches, pour avoir du laitage que j'aime beaucoup. Mon jardin serait un potager et mon parc un joli verger. Les promeneurs pourraient manger mes fruits qui ne seraient ni comptés ni cueillis par mon jardinier.

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## BENGALI (FOR FEMALE CANDIDATES)

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## COMPULSORY PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any two of the following passages into English :—

20

(a) যদি অর্জনশীল পুত্র পিতাকে ত্যাগ করেন, তবে এই অপরাধের জন্ত লোকে সাধারণতঃ পুত্রবধূকে দায়ী করে। অনেক সময় সত্য সত্যই মূল অপরাধ বধুরই বটে। দ্বী সহধর্মিণী, তিনি তাঁহার স্বামীকে যদি এই মহা অধর্মের পথে টানিয়া ল'ন, কে আর তাঁহাকে উন্নত করিবে? যদি বৃদ্ধ বয়সে পিতামাতা তাঁহাদের ছোট ছোট শিশু সন্তান লইয়া দিনরাত্রি দুঃখে ও দুশ্চিন্তায় সময় কাটাইতে থাকেন, অথচ যে পুত্রকে তিনি বহুকষ্টে মানুষ করিয়াছিলেন, সে পুত্রক হইয়া তাহার ভ্রাতাদের বা পিতামাতার খোঁজ না লয়, তবে সে দুঃখ পিতামাতা বলিবেন কাহাকে? তাঁহারা অবশ্য স্নেহের প্রতিদানে কিছু চান না,—কিন্তু পুত্রের নির্মমতায় তাঁহাদের প্রাণে যে ক্রোধ হয়, তাহা অনেক সময় তাঁহাদের মৃত্যুর কারণ হইয়া পড়ে।

(b) তাঁহার পল্লীবাটী হইতে প্রায় আধমাইল দূরে অনেক দুঃস্থ ও নিঃস্ব পরিবার বাস করিত। তাঁহাদের মধ্যে একবার বসন্তরোগের প্রাদুর্ভাব হওয়ায় বহুলোক চিকিৎসা ও শুশ্রূষার অভাবে অকালে কালগ্রাসে পতিত হইল। তথাকার ধর্মযাজক একাকী তাহাদের দুর্দশামোচনে অসমর্থ হইয়া এলিজাবেথের সাহায্যপ্রার্থী হইলেন। সেবাধর্মের একনিষ্ঠ সেবিকা এলিজাবেথ তদুৎকৃষ্টে তথায় আসিয়া উপস্থিত হইলেন। এ নিঃসহায় ও নিরাশ্রয় লোকদিগের যত্নদানদর্শনে এলিজাবেথের কোমল হৃদয় বিগলিত হইল। মুগ্ধিমত্তী দয়ারূপে তিনি তাহাদের গৃহে গৃহে গমন করিয়া সকলকে পরিস্কার পরিচ্ছন্ন থাকিতে ও বসন্তরোগের প্রতিষেধক টীকা গ্রহণ করিতে অতুরোধ করিতে লাগিলেন।

(c) আমরা বীরভূম জেলায় একজন কৃষি গৃহস্থের বাড়ী বেড়াইতে গিয়াছিলাম। গৃহস্বামী তাহার ছেলেকে চাকরী দিবার জন্ত আমাকে অতুরোধ করিতে আমি বলিলাম—কেনরে ছেলেকে চাষবাস ছাড়াইয়া



পরের অধীন করিবার চেষ্টা করিস্ কেন ? সে कहিল—বাবু, একদিন ছিল, যখন জমী জমা লইয়া আমরা সুখেই ছিলাম । এখন শুধু জমী জমা হইতে আর দিন চলিবার উপায় নাই । আমি জিজ্ঞাসা করিলাম—কেন বলত ? সে উত্তর করিল,—আমাদের চাল বাড়িয়া গেছে । পূর্বে বাড়ীতে কুটুম্ব আসিলে চিঁড়া শুড়েই সন্তুষ্ট হইত, এখন সন্দেশ না পাইলে নিন্দা করে । আমরা শীতের দিনে মোটা কাপড় গায়ে দিয়া কাটাইয়াছি, এখন ছেলেরা বিলাতি র‍্যাপার না পাইলে মুখ ভারি করে ।

2. Explain any two of the following passages with reference to the context :— 15

(a) হে পিতঃ, কেমনে

কবিতা-রসের সরে রাজহংস কুলে  
মিলি' করি কেলি আমি, না শিখালে তুমি ?  
গাঁথিব নূতন মালা, তুলি' সমতনে  
তব কাব্যোত্তানে ফুল ; ইচ্ছা সাজাইতে  
বিবিধ ভূষণে ভাষা ; কিন্তু কোথা পা'ব  
( দীন আমি । ) রত্নরাজী, তুমি নাহি দিলে,  
রত্নাকর ? কৃপা প্রভু, কর অকিঞ্চনে ।

(b) “বাস্তবিক হোমর                      স্মরণে দীক্ষিত  
মধুর স্মৃতিধারী  
অকাল-কোকিল                      মরুতল-তরু  
অ-নীর দেশের বারি  
এস ভাগ্যবান্                      কবিকুঞ্জ ধামে  
চিরসুখে কাল হর  
চিরজীবী হয়ে                      চির-আকাঙ্ক্ষিত  
জয়মাল্য শিরে পর ।”

(c) বীর বিনা, এ সময়,                      রাজ্যরক্ষা সাধ্য নয়,  
দেখ, বৎসে ! চিন্তিয়া অন্তরে ।  
বিভাগ করিলে রাজ্য                      বলহানি অনিবার্য  
প্রজার জন্মিবে অসন্তোষ ;  
রাজকূলে জন্ম লয়ে,                      রাজা, রাজ যাতা হয়ে,  
রাজনীতি না বুঝিলে দোষ ।

3. Attempt any one of the following :—

15

- (a) State what you know about স্মারক দৈবদ্য আহুত ।  
 (b) Give the substance of the discussion which, according to Nabin Chandra Sen, took place about the proposed rebellion against Sirajuddaula.  
 (c) Under what circumstances did Sribatsa lose Chintā ? Give an account of his reunion with her and the search which led up to it.  
 (d) Give in your own words the story of Rabindranāth Tagore's সাক্ষী, laying special stress on the tragedy involved in the misinterpretation of his honesty.

4. Correct the errors in the following :—

6

প্রোভামগুলিকে সমবেত দেখিয়া শশীশেখর পুলকিত হইলেন এবং সলজ্জিত হস্তে দশকবুন্দের দিকে চাহিয়া কহিলেন—আমি আপনাদের অহুমত্যাগুসারে বস্তুতা করিতে আসিয়াছি ; কিন্তু নিতান্ত মনোকষ্টে আছি তাই অত্যাধিক কিছুই বলিব না ।

5. Form sentences with any three of the following group of words so as to distinguish the differences of meanings :—

8

দুত, দ্যত ; কৃত, ক্রীত ; চির, চীর ; শম, সম ; সিত, স্মিত ; যতি, জ্যোতি ।

6. (a) Combine into a single sentence :—

5

ভূমি উত্তমরূপে কর্ষণ করা হইয়াছিল, সেই কর্ষণ করা ভূমিতে বীজ বোনা হইল, সেই বীজ হইতে অঙ্কুরের উদগম হইল, অঙ্কুর দেখিয়া কৃষকগণের আনন্দ হইল, কৃষকগণের সমস্ত সম্পত্তি নষ্ট হইয়াছিল, তাহার অত্যন্ত দরিদ্র ছিল ।

(b) Substitute single words for the following :—

5

সহজে যে রোগের চিকিৎসা হয় না ।  
 যাহার শত্রু জন্ম গ্রহণ করে নাই ।  
 যে আপনাকে কৃতার্থ মনে করে ।  
 যাহা অতিক্রম করা যায় না ।  
 যে জৈবের বিশ্বাস করে না ।

(c) Define বহুব্রীহি, বন্দ and কর্ণধারর samāsas and give an example of each.

6

7. Translate any two of the following extracts :—

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(a) বুদ্ধদেব আমাদের দেশের একজন মহাপুরুষ ছিলেন । তিনি ধর্ম প্রচার করিয়া ভারতবর্ষের হাজার হাজার নরনারীকে সাধু করিয়াছিলেন । তিনি প্রতিদিন এই চিন্তা করিতেন যে মানুষ হইতে কীট পতঙ্গ পর্য্যন্ত সকলের সুখ হউক । সকলের সুখে আমি সুখী হই, সকলের দুঃখে আমি দুঃখী হই । যাহা মন্দ তাহা দূর হউক, যাহা ভাল তাহা আহুক । তিনি লোকের সহিত এমন কথা কহিতেন যে তাহার

মন্দ ঠাণ্ড পরিভ্যাগ করিয়া সৎ হইবার জন্ত ইচ্ছা করিত। তিনি সমস্ত লোকের সহিত এমন মধুর ব্যবহার করিতেন যে, তাঁহারা তাঁহার অনুগত হইত। যাহারা দুঃখী তিনি তাহাদিগকে সুখী করিতেন, যাহারা অনাহারে আছে তাহাদিগকে আহার দিতেন, যাহারা কুকর্ম করে তাহাদিগকে সৎপথে আনিতেন।

(b) অজ্ঞানতা দূর করিতে না পারিলে, লোকে সদস্য বিচার করিবার অবসর পায় না। উন্নতি-সাধনের চেষ্টা শিক্ষা-প্রসূত। বর্তমান বাল্যলার দারিদ্র্য এবং কর্ম-শিথিলতা দূর করিবার একমাত্র উপায়—শিক্ষা-বিস্তার। দেশ-বিদেশের কাহিনী শুনাইয়া ও ভিন্ন ভিন্ন জাতির উত্থান-পতনের ইতিহাস বুঝাইয়া যদি আমাদের চৈতন্য জাগ্রত করিবার চেষ্টায় জনসাধারণের আগ্রহের অভাব দেখা যায়, তাহা হইলে বুঝিতে হইবে, এ জাতি ধ্বংসের দিকে অগ্রসর হইতেছে।

(c) সাধুভাবে চলিতে গেলে এ পৃথিবীতে অনেক সময় নিন্দাভাজন হইতে হয়, নানারূপ কষ্টে পড়িতে হয়। আমি কোনও এক ব্যক্তিকে জানি তিনি সরকারী কোন পদপ্রার্থী হইয়াছিলেন; নিয়ম আছে ২৫ বৎসর অতীত হইলে সরকারী কার্যে প্রবেশ করিবার অধিকার থাকে না। তাঁহাকে তাঁহার বয়স জিজ্ঞাসা করা হইলে তিনি তাঁহার প্রকৃত বয়স ২৬ বৎসর বলিয়াছিলেন, অনেকে তাঁহাকে সত্যকথা বলায় পাগল বলিতে লাগিল। যাহারা মানুষ অপেক্ষা ভগবানকে অধিক ভয় করেন, তাঁহারা প্রায়ই আমাদের মধ্যে পাগল বলিয়া পরিচিত হন। যাহারা কোন কুনীতি বা কুপ্রথা অথবা কদাচারের সংস্কার করিতে যান, তাঁহারা কত কষ্ট পাইয়া থাকেন।

ORIYA (FOR FEMALE CANDIDATES)

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COMPULSORY PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any one of the following passages into English :—

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(a) ଆମ୍ଭେମାନେ ପ୍ରତ୍ୟହ ବହୁଲୋକଙ୍କର ମୁଖ୍ୟସମ୍ମୁଦ ମୁଣ୍ଡଅଛି,  
ସେଥିମାନଙ୍କ ମନରେ ସବିଶେଷ ଦୁଃଖ ହୁଏ ନାହିଁ କିବା ହେଲେ  
ଅଧିକକାଳସ୍ତାୟୀ ହୁଏ ନାହିଁ । କିନ୍ତୁ ଜଣକ ମୁଖ୍ୟରେ ସମଗ୍ର ରାଜ୍ୟ  
ବାହିର୍ଦ୍ଧି ହାହାବାଇ ପୂର୍ଣ୍ଣ ହୋଇ ଯାଏ ? ମହାରାଣୀ ରିଦେନ୍ଦ୍ରାରିୟାଙ୍କ  
ଲୋକାନ୍ତର ଗମନରେ ବାହିର୍ଦ୍ଧି ପୃଥିବୀବ୍ୟାପୀ ଗୋବୋହାସ ଅରୁଧିବି  
ହେଲା । ପ୍ରାୟ ଗୋଧିକ ବର୍ଷ ପୂର୍ବରୁ ରାଣୀ ଅହଲ୍ୟା କାହ୍ନୁଙ୍କର  
ମୁଖ୍ୟ ହେଲାଣି, ତେବେ ଆଜି ବାହିର୍ଦ୍ଧି ଚାହାଙ୍କର ପବିତ୍ର ଜାମ  
ସ୍ମୃତିପଥାରୁଟ ହେଲା । ଏମାନଙ୍କର ଅବଶ୍ୟ ବିଧି ସୁରଣୀୟ ଗୁଣ ଅଛି,  
ଯଦ୍ବାରା ସମସ୍ତେ ମୁଗ୍ଧ ଏବଂ ଉପକୃତ । ତେଣୁ ସେମାନଙ୍କର ବିୟୋଗ  
ଲୋକଙ୍କର ଅସହ୍ୟ ହୋଇ ପଡ଼ିଅଛି ।

(b) ଉପରେ ଆହାର ବ୍ୟବହାର ବିଷୟ ଦେଖି କେତେକ କଥା  
ଲିଖିତ ଅଛି । ବର୍ତ୍ତମାନ ନିଦ୍ରା ପ୍ରବନ୍ଧର ଦ୍ଵିତୀୟ ଆଲୋଚ୍ୟ ବିଷୟ ।  
ସ୍ଵାସ୍ଥ୍ୟ ରକ୍ଷା ଥିଲେ ସୁନିଦ୍ରା ହୁଏ । ନିଦ୍ରାହେବାକେଲେ କୌଣସି ପ୍ରକାର

ବାଧା ଦେବା ଉଚିତ ନୁହେଁ । ଅନିଦ୍ରା ଅସ୍ବାସ୍ଥ୍ୟର ଲକ୍ଷଣ ଏବଂ ନିଦାନ । ଦିବା ନିଦ୍ରା ସ୍ବାସ୍ଥ୍ୟପକ୍ଷରେ ଭଲ ନୁହେଁ । ରାତ୍ରି ବିଶ୍ରାମର ସମୟ; ଅଧିକ ନିଦ୍ରା ଓ ଅଳ୍ପ ନିଦ୍ରା ଅସ୍ବାସ୍ଥ୍ୟକର । ରୋଗନର ଅବ୍ୟବହିତ ପରେ ନିଦ୍ରାଯିବା ଅନୁଚିତ, ନିର୍ଦ୍ଦିଷ୍ଟ ସମୟରେ ନିଦ୍ରା ନ ଶଲେ ଆହାର ପ୍ରବ୍ୟ ପରିପକ୍ୱ ହୁଏ ନାହିଁ, ଫଳତଃ ସ୍ବାସ୍ଥ୍ୟ-ରକ୍ଷା ହୁଏ । ସର୍ବଦା ଉପଯୁକ୍ତ ପରିଶ୍ରମ କରିବା ସୁନିଦ୍ରାର ଗୋଟିଏ ଉପାୟ । ନିଦ୍ରାଦୋଷରୁ ଲୋକେ ଅନେକ କଷ୍ଟ ରୋଗ କରିଥାନ୍ତି ।

2. (a) Test the truth of the statement :—

10

ଅର୍ୟାସ ମନୁଷ୍ୟର ଅପର ପ୍ରକୃତି ।

(b) Justify the following statement of the author :—

10

ନିଉଟନ ସ୍ବାୟଃ ଅଧ୍ୟବସାୟ, ପ୍ରତିରା, ସୁଗୀଳତା ଏବଂ ନିରୁଦ୍ଧାର ସ୍ବରାବ ଦ୍ବାରା ଅଧ୍ୟାପକ ଏବଂ ସନ୍ତାପ୍ୟାୟମାନଙ୍କର ପ୍ରକାରାକନ ହୋଇ ଥିଲେ ।

3. Give the purport of Asoka's edicts.

19

4. Write a short note on either ଅନୁଲ୍ୟା ବାଲ୍ or ରାଣୀ ଦୁର୍ଗାବତୀ

5. (a) Expound the *samāsas* in the following :—

4

ସୁଦୂରବାହି-ନଦୀବନ୍ଧ, ଗୁଥରମା, ଚନ୍ଦ୍ରବିଶବ୍ୟାମିତା, ଦୃଷ୍ଟିପଥାବୃତ୍ତ ।

(b) Construct sentences with adjectives of the following words :—

6

ପ୍ରତିରା, ଦେଶ, ପର୍ବ, ସଚିତା, ସୌଷ୍ଟବ, ଉଚ୍ଚିହାସ

6. Rewrite the following, correcting all errors :—

10

ଅବନ୍ତି ଦେଶରେ ଜଣେ ରାଣୀ ସଦୟାକୁ ନରପତି ଆଧୀପତ୍ୟ କରୁଥିଲେ । ତାଙ୍କର ପୁତ୍ର ଯାତ ନ ହେଲାକୁ ସେ ମାହାଦେବଙ୍କୁ ଅହୋନିଷି ରକ୍ତିର ଦାର୍ଦ୍ଦ୍ୟତାରେ ପୂଜା କରୁଥିଲେ । ସେ ବାହୁଣୀ ବରମୁକଦ୍ଦୁ ସନମାନ କରି ଗୌରବପାତ୍ର ସହିତ ଅଧୀକ ଦାନ ବିତରଣ କରୁଥିଲେ । ଚନ୍ଦ୍ରିକା ମାହାଦେବ ପ୍ରତି ଦେଖାଇ ତାଙ୍କୁ ନିଜ ସିଧ୍ୟରଣଙ୍କ ମଧ୍ୟରୁ ଗୋଟିଏ ପୁଅ ଦେବାକୁ ଆଜ୍ଞାହେଲେ । ଦୁର୍ଗାଦେବି ମାହା-ଦେବଙ୍କୁ ସାହା ରକ୍ଷ୍ୟହୋଇ ତାଙ୍କ ମନସ୍ଥାମନା ପୂରଣ କଲେ ।

Explain the following passages in simple Oriya :—

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(a) ଗାସନ ପ୍ରଣାଳୀ ଯେତିକି ପ୍ରଜାମାନଙ୍କର ଅବସ୍ଥା ଏବଂ ଉନ୍ନତିର ଉପଯୋଗୀ ହୁଏ ତେତିକି ତାହା ଉତ୍କୃଷ୍ଟ ବୋଲି ପରିଗଣିତ ହୁଏ । ଅଜ୍ଞତା ଅନେକ ପ୍ରକାର ଅମଙ୍ଗଳର କରଣ । ସର୍ବ ବେଶୀୟ ରାଜପୁରୁଷମାନଙ୍କର କର୍ତ୍ତବ୍ୟ ଏହି ଯେ ସେମାନେ ସ୍ୱସ୍ୱପ୍ରକାର ମାନସିକ ଉନ୍ନତି ସାଧନର ଉପାୟ ବିଧାନ କରିବେ । ସେମାନଙ୍କର ରାଜ, ରୁଚି ଏବଂ ବୁଦ୍ଧି ପରିମାଣିତ ହେଲେ ଗାସନପଦ୍ଧତିର ଦୋଷ ସଂଶୋଧିତ ହୁଏ ଏବଂ ରାଜପୁରୁଷମାନେ ଅପ୍ରତିହତରୂପେ ଅନ୍ୟାନ୍ୟ କରି ପାରନ୍ତି ନାହିଁ । ରାଜା ସମାଜପ୍ରତିଷ୍ଠିତ ବ୍ୟବସ୍ଥାବିରୁଦ୍ଧ କାର୍ଯ୍ୟ କଲେ ତାହାର ସମୁଚିତ ପ୍ରତିଫଳରୋଗ କରନ୍ତି ।

(b) ପଦାର୍ଥରେ ତାପ ପ୍ରୟୋଗକୁଲେ ତାହାର ଆୟତନ ବୃଦ୍ଧି 'ଉଷ୍ମତାବୃଦ୍ଧି' ଏବଂ ରାବାନ୍ତର ପ୍ରାପ୍ତି ଏହି ତିନୋଟି ପରିବର୍ତ୍ତନ ଘଟିବାର ଦେଖାଯାଏ । ସମାଜରେ କୌଣସି ମହାଘର୍ଷଣ ବା ବିପ୍ଳବ ଉପସ୍ଥିତ

ହେଲେ ଚକ୍ରନ୍ତିତ ଚାପଦ୍ୱାରା ରାଷା ଅପେକ୍ଷାକୃତ ପ୍ରସାରିତ ହୁଏ । ସେହି ସମୟରେ ରାଷାର ଦୁର୍ଗମୀ ପ୍ରବାହ ଦେଖାଯାଏ ଏବଂ ଭିରକାଳ ଉତ୍ତୁ ଚାପ ପ୍ରଦୁରପରିମାଣରେ ପାଇଲେ ରାଷାର ରୂପାନ୍ତର ହେବା ଅସମ୍ଭବ ହୁଏ । ଯୋଡ଼ିଏ ଗୀତୋକ୍ତ ପଦାର୍ଥ ପରସ୍ପର ସନ୍ନିହିତ ହେଲେ ଉଷ୍ମ ପଦାର୍ଥର ଚାପ ଗୀତଳ ପଦାର୍ଥକୁ ଧୀରେ ଧୀରେ ଚାଲିଯାଏ । ସେହିପରି ଚିତ୍ତଟି ରାଷା ପରସ୍ପର ସନ୍ନିହିତ ହେଲେ ଗୋଟିକର ରାବ ଅନ୍ୟ ଆଡ଼କୁ ଧୀରେ ଧୀରେ ସଂକ୍ରମିତ ହୁଏ ।

### HINDI (FOR FEMALE CANDIDATES)

*Paper-Setters*—{ PANDIT SAKALNARAYAN SARMA  
MR. NALINIMOHAN SANYAL, M.A.

*Examiner*—SREEMATI PREMLATA GHOSH, B.A.

#### COMPULSORY PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any three of the following passages, giving 24  
the context in each case :—

(a) तब कुल-कमल-विपिन-दुखदाई ।

सीता सीत-निसा-सम आई ॥

रामबान अहिगन-सरिस निकर निसाचर भेक ।

जब लगी ग्रसत न तब लगी जतनु करहु नजि टेक ॥

सभय सुभाव नारि कर सांचा ।

मंगल महुं भय मन अति कांचा ॥

(b) ऊधो अँखियां अति अनुरागी ।

इकटक मग जोवति अरु रोवति भूलेहु पलक न लागी ॥

बिन पावस पावस ऋतु आई देखत है बिदमान ।

अब धौं कहा कियो चाहत है छांदहु निर्गुन ग्यान ॥

सुनि प्रिय सखा स्याम सुंदर के जानत सकल सुभाइ ।

जैसे मिले सूर के स्वामी तैसो करहु उपाइ ॥

(c) हिन्दू वृक्ष की इन शाखाओं से औरंगजेब ऐसे बेटे इसलाम की कुल्हाड़ी में अकबर ही ने छापाए थे। मेरे विचार में दीन इलाही का ढांग भी राजनैतिक दृष्टि से शासन इढ़ करने के लिये और धार्मिक दृष्टि से इसलाम को सर्वप्रिय बनाने के लिए किया गया था।

(d) महान् उद्देश्य को लेकर जो महान् पुरुष संसार में अवतीर्ण होते हैं, उनमें वैसे ही महान् गुण भी होते हैं—उनका व्यक्तिगत चरित्र इतना उन्नत और दिव्य होता है कि सारा संसार उनकी ओर खिंच जाता है।

2. Give a very short account of the life of Guru Govind Singh so as to bring out the most noteworthy feature of his character. 10

3. (a) Give the meanings of six of the following words :— 6

अर्धांगिनी, पञ्चन्य, राज्य-क्रान्ति, आर्य-संस्कृति, अक्षौहिणी, अफवाह, एकरस, क्षण-भंगुर, महाप्रतीहार, माध्वी, पड़ाव, हौसला।

(b) Give the meanings of five of the following expressions, and write sentences to illustrate their use :— 5

धाक बैठना, आंखों पर परदा पड़ना, छोहा मानना, मुहतोड़ जवाब, नाकों दम करना, तहस नहस करना, छपा मारना, धावा बोलना, आन की आन में, सिक्का जमाना।

(c) Parse three of the underlined words of the following :— 5

सुनि सीता दुख प्रभु सुखअयना।

भरि आये जल राजिवनयना ॥

बचन काय मन मम गति जाही।

सपनेहूँ बुक्षिय विपत्ति कि ताही ॥

4. Re-write the following correctly :— 15

पटना से कोई प्रोफेसर साहब हमें एक पत्र लिखे हैं। वह पत्र से मालूम होता कि गत वर्ष वहाँ की चार महिला बी. ए. परीक्षा पास किए हैं। एक जो बहुत बुद्धिमान है वह एम. ए. पढ़ रही है। प्रोफेसर साहब हमें कहे हैं कि तुम भी परीक्षाएँ पास करना चाहिये। यह पढ़ कर हमने हंस दिये।

5. Write sentences in Hindi according to the directions given :— 10

(a) Use हवा in the objective, and तकिया in the possessive case.

(b) Use a verb having two objects.

(c) Illustrate the भाव वाच्य.

(d) Use a प्रेरणार्थक verb.

(e) Use a compound verb.



6. Translate the following into English :—

25

(a) गाड़ी यात्रियाँ से खचाखच भरी थी। कहीं तिल धरने को जगह न थी। मेरे सामने एक व्यक्ति फटे-पुराने कपड़े पहने लेटा था। मैंने उससे कहा—“भई, ज़रा उठकर बैठ जाओ।” परन्तु वह उसी तरह पड़ा रहा, जैसे उसने कुछ सुना ही न हो। अब मुझे कुछ क्रोध आया। मैंने झल्लाकर कहा—“उठकर क्यों नहीं बैठते? लोगों को बैठने की जगह नहीं है, यह पांच पसारे पड़ा है। उठो।”

(b) हिन्दुओं ने उन्हें सच्चा त्यागी, परोपकारी और भारत का हितेच्छु पाया। वे उनके उपदेशों को बहुत चाव से सुनते थे, उनसे मित्रता का व्यवहार करते थे, उनका हृदय से स्वागत करते थे। यह सब तो था, पर वे उनके पंथ को ग्रहण करने के लिये तैयार नहीं थे। इससे वह हताश नहीं हुए, और लोगों के उपकारार्थ पाठशालाएँ, निवासस्थान तथा चिकित्सालय स्थापित किये।

## URDU (FOR FEMALE CANDIDATES)

### COMPULSORY PAPER

*Paper-Setter & Examiner—KHAN REZA ALI WAHSHAT*

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following extracts :—

25

(a) اب جہاز روانہ ہوا اور خدا کے فضل سے ہوا ایسی موانق آئی کہ بغیر کسی حادثہ اور مصیبت کے اس بندرگاہ پر جا لگا جہاں کا عزم کر کے چلے تھے۔ سب مسافر بغیر عافیت خشکی پر اترے۔ برے بھائی نے کچھ بھیڑیں اور بیل خریدے اور مع اپنے نوکروں اور آلات و اسباب کے ایک عمدہ قطعہ اراضی میں جو ساحل بحر سے ملحق تھا قیام کیا اور چھوٹے بھائی سے کہہ دیا کہ میں یہاں نہ تو بود و باش کرنے آیا ہوں نہ دولت کی طمع مجھ کو لائی ہے بلکہ صرف تمہاری رفاقت کی غرض سے آیا ہوں۔ جب تم سونا لیکر جاؤ گے تو میں تمہارے ساتھ وطن کو واپس چلونگا \*

(b) رامجندر جی نے کرناٹک کے راجا کی اعانت سے لشکر کشی کا عزم کیا۔ بے شمار فوج ظفر موج سیت بند کا پل باندھ کر سر زمین لنگا پر اتار دی۔ اور آغاز جنگ سے پیشتر انگد جی وزیر اعظم راجہ سگریو کو رازن کے سمجھانے کو بھیجا مگر جب صلح و صلاح سے رازن راہ راست پر نہ آیا تو رامجندر جی کے لشکر نے خوب معرکہ آرائی اور جدال و قتال کیا یہاں تک کہ بد ذات رازن انکے ہاتھ سے ہلاک ہوا \*

(c) فرید خان عالم نوجوانی میں باپ کی سختیوں سے ملول ہو کر سہسرام سے چونپور چلا گیا اور وہاں تحصیل علم میں مصروف رہ کر علم ادب اور تواریخ میں اس نے بڑی مہارت پیدا کی۔ آخر مذا پرچا کر باپ نے بلا لیا اور جاگیر کے کاموں کا انصرام اسکے سپرد کیا۔ اس ہونہار نے ایسا عمدہ انتظام کیا کہ رعایا خوشحال اور باپ کا خزانہ مالا مال ہو گیا۔ باپ کی وفات کے بعد ابراہیم لودی کے حکم سے یہ جاگیر خود اسکے نام ہو گئی \*

2. Give the meanings in English of any five of the following words :— 5

اسراف - رشوت ستانی - دیدہ و دانستہ - ساحل - طمع - کلفت - بعید - ضعیف العقل - آتشبازی - استقبال

3. Give the gender of any five of the following words :— 5

فوج - عمارت - زمیں - آسمان - جہاز - سمجھ - جواب - کوشش - رنگ - شکل

4. Either, Give a sketch of Ahalyā Bāī's life. 15

Or, Describe the character of Sultān Firūz.

5. Give the Urdu nominative plurals of 5

عورت - لڑکا - مرغی - انڈا - چھت

6. Correct mistakes in the following :—

20

(۱) تمہارا ملک میں کوئی اسکول ہے (۲) تمہارے  
بھائی کو بلار (۳) ہمارے پاس چار لڑکا آیا تھا (۴) اسکا کتاب  
میلا ہو گیا ہے (۵) یہ کہی اچھی نہیں ہے (۶) تم اس سے  
کیا کہے (۷) ہم نے (رڑی) کھایا ہے (۸) تم جانے سکتے ہو  
(۹) وہ آنے چاہتا ہے (۱۰) وہ عورت کو اسکے گھر بھیج دو  
(۱۱) ان لوگ کو جانے دو (۱۲) اسکی لڑکیاں کی شامی ہو  
گئی ہے (۱۳) ہم ابھی کھانا نہیں کھائے ہیں (۱۴) اگر تم کل  
آتے تو ہم گھر سے باہر نہیں نکلتے (۱۵) آپکے چار گھوڑے کو ہم نے  
میدان میں دیکھا ہے \*

7 Translate into Urdu :—

25

- Have you written the letter? If not, you should do so at once.
- My father has sent me no money.
- Before the school closes for the summer I will meet you.
- You promised to come. What prevented you from coming?
- See me to-day at 6 p.m.

### ASSAMESE (FOR FEMALE CANDIDATES)

Paper-Setters—{SRIJUT SURYYAKUMAR BHUIYAN, M.A.  
Mr. BANIKANTA KAKATI, M.A.

Examiner—MR. ATAUR RAHAMAN

### COMPULSORY PAPER

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Translate into English any two of the following passages :—

16

(a) যি সময়ত অসমদেশ হাবি শুচি ফুলানি-বাবী হব, ডোঙা  
শুচি ভাপ-নাও হব, ঘৰ বাহৰ শুচি ইটাৰ পকো হব, গাওঁৰে গাওঁৰে  
হেৰাব-বিজাব পঢ়া-শালি, জ্ঞান-আলোচনাৰ সভা, চিকিৎসালয় আৰু  
দুখী-দৰিদ্ৰৰ পৰিভ্ৰাণৰ আলয় হব; সেই সময়, পৰম পিতা পৰমেশ্বৰ,  
শীঘ্ৰে ঘটোৱা।

(b) কুমারী ভিক্টোৰীয়া সৰুৰে পৰা অতি দয়ালৱী, কৰ্মাণীয়া, সভ্যপ্ৰিয় আৰু ধাৰ্মিক আছিল। গুণবতী মাতৃৰ বন্ধত খটান ধৰ্মৰ পৰিষ্কাৰ ধৰ্ম-পুথি বাইবেল শিক্ষা কৰি, তেওঁ ঈশ্বৰ প্ৰেমত বৰ অনুরক্ত হৈ উঠিছিল। বয়সৰ সাৰ পাই ভিক্টোৰীয়াৰ পৰিষ্কাৰ ধৰ্মভাব উজ্জলতৰ জেউতিৰে জিলিকি আহিবলৈ ধৰিলে।

(c) সন্ধিয়াৰ বঙা বেলি মাৰ যায় যায়, কামাখ্যাৰ পিছ পিনে প্ৰকৃতি-কোলাত, শোভিছে পৰ্ব্বতে, যেনে শোভে তিবোতাই ফুল পিছ পিছ পিনে ধুনীয়া খোপাত।

2. Either, Write a short sketch of Chandranath Sârma's life. 12

Or, Reproduce the substance of Hemchandra Barua's life-sketch as written by himself.

3. Give the substance of the poem চিত্ৰলেখা in *Anjali* or of সীতা-ৰূপ by Ananta Kandali. 10

4. Explain with reference to the context any three of the following :— 12

(a) পৰিল উভালি যদি বৰ গছ শুবি।  
দাজিৰ নোৱাৰে মূৰ মুঠে আৰু বুৰি।

(b) পৃথিবীৰ বুৰঞ্জীয়ে সাক্ষ্য দিয়ে যে প্ৰায় সকলো মহাপুৰুষ আদি অৱস্থাত দুখীয়া আৰু অভাৱ যুক্ত আছিল।

(c) ভিতৰত নেথাকিলে ই বিলাক গুণ,  
একো নাই বাহিৰত থাকে যদি ধুন।

(d) অকচি, এলাহ আৰু কলা ঘুমটীয়া।  
চুব-কৰা, মিছা-কোৱা, তোৰ লগৰীয়া ॥

5. Give the opposite gender of five of the following words :— 10

শৰ ; মাথুলী ; পত্নী ; পলৰীয়া ; ভাদৈ ; সম্পাদক , কবি।

6. Name the *samāsas* in any five :— 10

আম-কঠাল ; বুকু-পাতল ; হাতে-বোৱা ; কন্দনা-মুৱা ; কুসুম-বুলীয়া ;  
ঘৰ-ওপজা ; চকু-বোৱা।

7. Form adjectives from any five of the following :— 10

মাজ ; টাকৰ ; জোল ; দোৱান ; মেল ; বঙাল ; বিলাত।

8. Split up the *sandhis* in any five of the following :— 10

পটেশ্বৰী ; পৰীক্ষা ; কামাখ্যা ; পুৰুষোত্তম ; প্ৰাগজ্যোতিষ ;  
মৰ্মাস্তিক ; বিসঙ্গতি।

9. Translate into English :— 10

আজি কালি অসমীয়া তিবোত সকলে দেশৰ কমে কবিব ধৰিছে।  
তেওঁলোকে অসমৰ বহু ঠাইত মহিলা সমিতি পাতিছে। এইটো

వర భాగ కథా । అసమీయా తిబోతావ గాత బహు భాగ శుభ ఆహే ।  
 తెఱ్ఱలొక వర కామిలా । ఎలాహ్ ఆక విలాహ్ తెఱ్ఱలొకే తాగ నెసాయ ।  
 అసమీయా తిబోతా కాసోవకాని బోరాత వర పార్గత । అసమీయా తిబోతా  
 సకలె తెఱ్ఱలొకర భాగ శుభ బోర బక్సా కరొ ఉఱిత ।

## TELUGU

*Paper-Setter and Examiner—DR. B. RAMCHANDRA RAO,*  
*M.A., PH.D.*

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. మతసిద్ధాంతములను బాల విద్యాలయములలో బోధించు నవసరమా, లేదా? విశదముగా వ్రాయుడు. 12
2. లలిత కళలననేమి? శాస్త్రపరిజ్ఞాన మవసరమా, లేదా? విశదముగా వ్రాయుడు. 12
3. ఆంధ్ర జాతీయ విద్యాపరిపత్తు అవశ్యకమా, లేదా? దానియొక్క పను లెవ్వయో వ్రాయుడు. 12
4. “గురుకుల సంస్థాపనము మిక్కిలి దుస్సాధ్యముగ నున్నది” దీనికి కారణములను తెలుపుడు. 14
5. లక్ష్మీప్రసాదమును గ్రంథమును చదువుటవలన నీతు లెవ్వయో విపులముగా వ్రాయుడు. 30
6. కన్యా శుల్కము, వరశుల్కము వలన కలుగు నష్టములెట్లు బోధపడగలమో మీ పఠనీయ గ్రంథమునం దుదహరింపబడిన వో వ్రాయుము. 20

TAMIL (FOR FEMALE CANDIDATES)

COMPULSORY PAPERS

*Paper-Setter and Examiner—MM. VEDANTAVISHARAD  
ANANTAKRISHNA SASTRI*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. “கொட்டிணுந்தேன் ; கொட்டாவிட்டான் பிள்ளைப்பூச்சி.” 15  
“சன்மாற்கத்திலும் வீண் பிடிவாதம் ஆகாது.” இவற்றை  
யொட்டி ஓர் உபாக்கியானம் எழுதவும்.
2. மகாபாரத கதைளில் எந்த பாகம் “தம்மஸங்கடம்” 20  
என்பதையும் இராமாயணத்தில் “பிடிவாதத்தான் நன்மை விளைத்தல்”  
என்பதையும் விரையு.
3. பதவத் சேதையின் வாலாற்றையும் கருத்தையும்பற்றி 20  
எழுதவும்.
4. அடியிற்கண்ட சொற்களின் பொருள் யாது? (a) ஆசிரமம், 10  
(b) கஜேந்திரமோகம், (c) ஸமதிருஷ்டி, (d) திருமால்,  
(e) குருதக்பிணை.
5. ஆசிரியமத உபாக்கியானத்தையொட்டி “நமது கடமை” 15  
என்ற விஷயத்தைப்பற்றி ஓர் வியாஸமெழுதவும்.
6. Translate into Tamil :— 20  
Srunjāya.—Who are you? Boy! What is your name?  
Nārada.—I am the son of Brahmā, the creator, and they call me Nārada.  
S.—What is your errand and where are you coming from?  
N.—I am on my way back from Badarika.  
S.—Why have you been there, boy, and what did you do?  
N.—I went there to visit the great Rishis, Nāra and Nārāyaṇa.  
S.—What was the object of your visit to them?  
N.—I wanted to know from them how to gain freedom from successive  
births.  
S.—That is a good thing. You seem to be a worthy son of a worthy  
father. Could you not learn this from your father?  
N.—No sir, my father would not teach me this. He ordered me  
to lead a family life, which I hated from the beginning.

## KHASI (FOR FEMALE CANDIDATES)

## COMPULSORY PAPER

*Paper-Setter & Examiner—MR. ROY ROWLAND THOMAS, M.A.*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

15

Shisien mynhyndai la don arngut ki brierw ki ba ialok iaient shi bun eh, uwei u long u ba duk bad uwei pat u ba riewspah; une u ba duk u shu dem leit kai baro bor ha iing uta u riewbha, bad kat ba u leit kumta u riewbha u ai ia ki jingbam ia u. Ha kuwei ka ang u ba duk u ong ia uta u riewbha, 'Ko lok tang ma nga te baro bor nga wan kai ha iing jong phi, phi te shisien ruh phim ju wan kai satia ha iing jong nga, 'Shisha kein lok' ong u riewbha, 'nga la long khlem akor shi bun eh, ia ba ngam ju kloi ba bun kam eh jindei, la kumta ruh ngan wan ho ha kane ka taiew'.

2. Give the signs of the subjunctive mood in Khasi with illustrations. 15

3. *Either*, Batai ia ka Phawer ka ba kynthoh ia kine harum. Ha ba poi kyndit ba ka khim dei bun bat la ka jingtip brierw. 15

*Or*, Ka jingiatylli ka long ka bor.

4. Iathuh ia ka Phawer shaphang U Khla, Ka Dngiem bad U Myrsiang; lane, shaphang U Sing bad U Brierw. 15

5. Explain in Khasi any two of the following with reference to the context :— 20

(a) Leh shuwa maphi ia kiwei kumba phi kuah ba kin leh ia phi.

(b) Ka Mariang kan kyrshoin ia ka Rongphong.

(c) Dei kiwei pat ki ba tip ia ka dor ba shisha jong ugi.

6. Ka Jingstad ka kular ain phi shem ha ka Kitab Ki Proberb ka ba Ar Lynnong? 10

7. Iathuh lyngkot ia ki jingsneng jong U Syiem Lemuel kumba phi shem ha ka Kitab Ki Proberb ka Lynnong ka ba Laiphewwei. 10

## BENGALI (FOR MALE CANDIDATES)

*Paper-Setter—RAI BAHADUR DR. D. C. SEN, B.A., D.LITT.*

*Examiners—* { SIREMATI SANTA NAG, B.A.  
                  ,, SNEHALATA RAYCHOUDHURI, M.A.  
                  ,, PUNYAPRABHA DASGUPTA, B.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Explain with reference to the context any two of the following :—

(a) পুষ্পের পক্ষে পুষ্পই যত সহজ, মানুষের পক্ষে মানুষই তত

সহজ নহে।

১৫

(b) আমি নিকটস্থ হইয়া দেখিলাম, তাঁহার হস্ত বক্ষঃ-স্থলে এবং অনামিকা অঙ্গুলি উর্দ্ধমুখে রহিয়াছে। তাহা দেখিয়া আমার বোধ হইল, মরিবার সময় উর্দ্ধে অঙ্গুলি নির্দেশ করিয়া আমাকে দেখাইয়া গেলেন, “ঐ ঈশ্বর ও পরকাল”। দিদিমা যেমন আমার ইহকালের বন্ধু ছিলেন, তেমনি পরকালেরও বন্ধু।

(c) যদি গ্রহান্তরে জ্ঞানবান্ জীব থাকে, তবে বৃহস্পতির বাস্য-বরণই দেখিতে পায়; পৃথিবী তাহাদিগের প্রায় অদৃশ্য। তজ্জপ আমরাও বৃহস্পতি প্রভৃতি গ্রহগণের রোদ্ৰ-প্রদীপ্ত, রোদ্ৰ-প্রতিঘাতী বাস্যীয় আবরণই দেখিতে পাই।

(d) যে সকল গুণ এই হতভাগ্য দেশে কোন ক্রমেই বিকাশ পাইবার সুযোগ লাভ করিত না, যাহা রোদ্ৰতাপে বিগুফ কোরকটির ত্রায় অকালে ঝরিয়া পড়িত, সেই সকল গুণ তাঁহার হিতকাৰী নিত্যবর্ষী উৎসাহধারা সেচনে বিকশিত হইয়া উঠিয়াছে।

2. Unfold the allusions and references contained in any three of the following :— 15

(a) আমি বলিলাম, “আমি বাজালী”। সে বিশ্বাস করিল না, বলিল, “না, তুমি সাহেব।” তাহার মনে করিয়া থাকিবে যে, যে গাড়ী চড়ে সে অবশ্য সাহেব।

(b) শ্রেষ্ঠী মনে করিলেন, ভাল করিয়া দেখিতে হইবে। এমন লুকোচুরি চলিবে না। প্রভুর গমন পবে বাঁতি দিয়া থাকিবে, আর ঘরে ফিরিতেছি না।

(c) তোমার কথার উত্তর দিতে কথা থেমে গেল মুখে,  
সারা দুনিয়ার বত ভাষা আছে কেঁদে ফিরে গেল দুঃখে।  
তোমার বাপের লাজল জোয়াল হু’হাতে জড়িয়ে ধরি  
তোমার মায়ে যে কতই কাঁদে সারা দিনমান ভরি।

(d) নিজের দীনতা ভাবিয়া ত্রীধর পারে না গোপিতে বারি,  
লাগিতেছে আজ মুকুতার মালা পাষাণের চেয়ে ভারি।  
এমনি হরির অহেতু করুণা—প্রেমের এমনি বাহ,  
কয়লা হৃদয় গলি হীরা হয় তস্করও হয় সাধু।

(e) এইরূপ পরস্পরের পার্শ্বে, সৃষ্ট জগৎ ও সৃষ্টি-কর্তার হস্তের আশুধ সাকার রূপে দর্শন করিলাম। এই ত্রিশূল যে স্থিতি ও প্রলয়ের চিহ্নরূপী, তাহা পরে বুঝিলাম।

(f) বঙ্গদেশের আধুনিক সময়ের সর্বপ্রাচীন কবি যে অনাথ ও ভিক্ষুকদের সঙ্গে প্রাণত্যাগ করিয়াছেন, পরে কবির স্বর্ণময় প্রতিমূর্তি স্থাপন করিলেও এ কলঙ্ক মোচন হইবে না।



3. Parse any *three* of the words underlined in the above extracts. 8
4. Write out from memory any *four* consecutive lines from the poem *Sarat* by Rabindranāth, and give short biographical accounts of Nabin Chandra Sen, Bankim Chandra Chatterjee and Devendra Nāth Tagore. 4
5. Correct all errors in the following :— 10

আজ সন্ধ্যা কালে যখন নদীর তীরে বেরাইতে যাই, তখন একটা পাথরের উপর উচ্চ খাইয়া পরিয়া গিয়াছিলাম, ভাগ্য বসত আমার বন্ধু অপাধ তখন এক পাশে দাঁড়াইয়াছিল, সে যদি না ধরিত তবে আমার পায়ে ভিষন চোট লাগিত। তুমি গত কল্য অবস্থ আমার বারিতে একবার আসিবে; আমি আগামী পরশ্ব দিন একবার তোমাদের গ্রামে গিয়াছিলাম, তখন তোমাকে না পাইয়া নিরানন্দ হইয়া ফিরিয়া আসিয়াছি।

কলিকাতা হইতে খবর পাইলাম দাদা জর হইয়া পরিয়াছেন, তাঁহার ডান হাতটা ফুলিয়া যাওয়াতে তিনি কাপড় পড়িতে পারেন না। তথাপিও তিনি কিছুতেই কলিকাতা হইতে আসিবেন না।

6. Re-write the following giving proper punctuation-signs :— 5

যদিও তাহার কাজের অন্ত নাই তবু কি সে কোন রূপ আনন্দ উৎসবে যোগ দান করে না শত কাজ ঠেলিয়া ফেলিয়াও সে মাঝে মাঝে বাহিষ্কোপ দেখিতে ছোট নৌকায় ভ্রমণ করিতে যায় এবং সঙ্কীর্ণনে যোগ দান করে কি আশ্চর্য্য লোক—যখন ঘুমায় তখন বোধ হয় স্বপ্নও দেখে না হাজার ডাকে ঘুম ভাঙ্গে না এমনই গভীর তাহার নিদ্রা বাড়ীতে কেহ মারা গেলেও তাহাকে একান্ত শোকাতুর হইতে দেখা যায় না এ যেন শোক দুঃখের অতীত এক মহাপুরুষ।

7. Fill up the ellipses in the following :— 4

তুমি কখনও কি এরূপ—যে মানুষের মন এরূপ—মত কঠিন হইতে পারে? যখন সে তাহার মাতৃ—সংবাদ শুনিল তখন সে—চিহ্নে কোনরূপ দুঃখ প্রকাশ না করিয়া শ্রাদ্ধের ফর্দ করিতে বসিয়া গেল।

8. Write short sentences using any *six* of the following words :— 6

ধ্বনি, অভ্রভেদী, ঔৎসুক্য, হৃদয়বিদারক, মহিমা, আশ্রয়, কুয়াশা, উত্তেজনা, অশ্রুমনস্ক।

9. Translate the following passage into English :— 20

দিদিমার যখন মৃত্যুকাল উপস্থিত তখন আমার পিতা এলাহাবাদ-অঞ্চলে ভ্রমণ করিতে গিয়াছিলেন। বৈজ্ঞ আসিয়া কহিল, রোগীকে আর গৃহে রাখা হইবে না। অতএব সকলে তাঁহাকে গঙ্গাতীরে লইয়া বাইবার জন্ত বাড়ীর বাহিরে আনিল। কিন্তু দিদিমা আরও ঝাঁচিতে চান, গঙ্গায় যাইতে তাঁহার মত নাই। তিনি বলিলেন, “যদি দ্বারকানাথ বাড়ীতে

ধাক্কিত, তবে তোর কখনই আমাকে লইয়া বাইতে পারতিস্ নে।” কিন্তু লোকে তাহা শুনি ন, তাঁহাকে লইয়া গঙ্গাতীরে চলিল। তখন তিনি কহিলেন, “তোরা যখন আমার কথা না শুনে আমার গঙ্গায় নিয়ে গেলি, তেমনি আমি তোদের সকলকে খুব কষ্ট দিব। আমি শীঘ্র যাবি না।” গঙ্গার ভায়ে একটি খোলার চালাতে তাঁহাকে রাখা হইল। সেখানে তিনি তিন রাত্রি জীবিত ছিলেন।

10. Translate into Bengali :—

26

There lived not many years ago two neighbours, Rām and Jogesh. Rām was too ready to trust every man he met; but Jogesh loved money so well that he often forgot that honesty is the best policy. One day Rām came into Jogesh's house and said, 'Jogesh, I am about to take a journey to see my uncle who is very ill. I have one thousand rupees which I want to leave behind. What shall I do with it?' Jogesh's eyes brightened and he replied, 'I have a good iron safe in which I keep my money and notes. Fire cannot harm it and thieves cannot open it. I put the key in a place known only to my wife and myself. I think you cannot do better than put your money into my safe.'

## BENGALI (FOR MALE CANDIDATES)

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*Write your answers in pure সাধু ভাষা or in pure চলিত ভাষা*

*A mixture of both is undesirable*

*Translate either of the two following passages into English :—*

(a) তাহার শ্রবণ-মাত্র বিনয়-নয়-বচনে কহিল, মহারাজ ! আমরা বনবাসী, বিলাসী বা ভোগ-বিলাসী নহি ; যদুচ্ছালক ফলমূল মাত্র আচার ও বন্ধনমাত্র পরিধান করিয়া কাল-যাপন করি ; আমাদের স্বর্ণে প্রয়োজন কি ?

(b) আমরা অনেক পরিশ্রমে ও অনেক ব্যয় যাপনের চরিত কণ্ঠস্থ করিয়াছিলাম ; আজি আপনার সমক্ষে তাহার পরিচয় দিয়া, আমাদের সেই যত্ন ও পরিশ্রম সর্বতোভাবে সার্থক হইল।

2. (a) Parse the words underlined in the above and expound the *samāsa* in যদুচ্ছালক.

(b) Explain the references given in Question 1. What স্বর্ণ is alluded in the last line of Question 1 (a)?

3. Explain the following passage, bringing out its full significance :— 5

সেখা শুক চপল বাসনা মানসে,  
হত লালসার উগ্রতা,  
রাজে মৌনমুক্ত শব্দ পদে  
তাপসীর চারু শুভ্রতা ।

4. Translate any two of the following passages into English :— 30

(a) যাহারা বেশী কথা বলে, অনেক সময় তাহাদের কথায় বিশ্বাস করা যায় না। মানুষের বাক্য-সংঘম অভ্যাস করা সর্ব প্রধান কর্তব্য। আমরা যে সকল কথা বলি, তাহা ভুচ্ছ করিবার বিষয় নহে। কথা অতি গুরুতর শক্তি বহন করে। কেহ একটা কথা বলিয়া শেষে অনুতাপে দগ্ধ হয়, কেহ একটা কথা শুনিয়া আত্মহত্যা করে। কথায় মানুষ মানুষের শত্রু হয়, আবার কথায় বহু দিনের শত্রুতা দূর হইয়া লোক অন্তরঙ্গ হয়। অসংখ্য কথায় সময় সময় লোক এত উত্তেজিত হয় যে এক জাতির সঙ্গে অজ্ঞাতের লড়াই বাধিয়া যায়।

(b) স্মরণ্য কথা একখানি তরবারির মত। উহা যেখানে সেখানে ব্যবহার করিতে নাই। তরবারি আমাদের মহা উপকারী, কত বিপদের সময় উহা দ্বারা আমরা আত্মরক্ষা করিতে পারি; কিন্তু অবিবেচকের মত এই অস্ত্র ব্যবহার করিলে বিষম অনিষ্ট ঘটয়া থাকে। কথা বলিবার পূর্বে চিন্তা করিয়া দেখিও সেই কথায় কাহারো মনে কষ্ট হইবে কিনা—সে কথার মধ্যে মিথ্যা মিশ্রিত আছে কিনা। অনেক সময় আমরা পরকে ঠাট্টা করিয়া থাকি, তখন সকলে আমাদের কথা খুব উপভোগ করে এবং বেশ বাহাহুরীও দেখান হয়।

(c) কিন্তু আমাদের ভাবিণী দেখা উচিত, যাহাকে ঐ ভাবে ব্যঙ্গ করিয়া আমরা বাহাহুরী পাই, সেই ব্যক্তি হয়ত সেই ব্যঙ্গে অত্যন্ত মর্ম্মাহত হইয়াছে। হয়ত: সেই কথা শুনিয়া সে দিন সে মন:কষ্টে সারারাত্রি ঘুমায় নাই। মন বলিয়াছেন, সত্য কথা বলিবে, প্রিয় কথা বলিবে—যে সত্য অপ্রিয় তাহা বলিবে না, এবং যে কথা সত্য নহে তাহা প্রিয় হইলে বলিবে না। কথা বলিবার পূর্বে আমাদের এইরূপ সজাগ থাকিতে হইবে। কথা এত বড় গুরুতর বিষয় যে রামচন্দ্র তাঁহার পিতার একটি কথার অস্ত্র বনে গিয়াছিলেন।

5. Join the following short sentences to make one sentence :— 5

- (a) সে ভাত খাইয়া ছিল।  
(b) সে তখনও জল খায় নাই।  
(c) সে দ্রুততার সহিত চলিল।  
(d) সে যথাসময়ে বাড়ীতে পৌছিল।

6. Correct all errors in the following :—

15

আমি তাকে নিষেধ কৰিয়াছিলাম, কিন্তু সে আমাৰ কথায়  
কৰ্মপাত কৰিল না, মনোকষ্টে তখনই বাৰি ছাৰিয়া বিদেশে চলিয়া গেল।  
তাহাৰ সঙ্গ একটা কৰিও ছিল না, পথ ঘাট তাহাৰ অপৰীচিত ছিল, কিন্তু  
ৰাগেৰ ঝোকে কিংকৰ্তব্যবিমূৰ্খ হইয়া একটা পাগলের মত অজানা পথ  
বহন কৰিয়া দস দিনেৰ পরে পদব্রজে কলিকাতা পৌছিল। আপনায়  
উহাকে শাসন কৰুণ।

7. Illustrate the use of a noun, a pronoun, an adjective, an adverb and  
a verb by framing one sentence in Bengali.

5

8. Translate the following into Bengali :—

25

Learn to obey. Obedience is the first duty which children owe their  
parents. 'Honour thy father and thy mother' is the Divine Command.  
The proper spirit of obedience is shown when a child complies at once  
with the wishes of his parents. It does not allow him to stop and argue  
the point with them or to set up his own will in opposition to that of his  
parents: The duty is to obey without questioning. Children are not  
always able to see the reason of their parents' requirements. But that  
does not excuse disobedience. They should obey because their parents  
know better than they do what will be for their good. But children are  
not obliged to obey their parents in anything that is wrong or sinful.

## ASSAMESE (FOR MALE CANDIDATES)

### COMPULSORY PAPER

*Paper-Setter*—SREEJUT AMBIKANATH BORAH, M.A.

*Examiner*—SREEJUT BANIKANTA KAKATI, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following :—

20

(a) হান্দিবৰ চকিত আৰু দক্ষীণ পাৰতো মানব অত্যাচাৰ  
দিনকদিনে বাঢ়িবলৈ ধৰিলে। সিহঁতে কোম্পানিৰ বাজাৰ ভিতৰতো  
উপদ্রব কৰিবলৈ ধৰিলে। কোম্পানি বাজাৰ মানুহ বিলাকে পলাই  
গৈ গোৱালপাৰাত ডেভিড্‌চন চাহাবৰ আগত মানে কোম্পানি বাজাৰ  
ভিতৰত কৰা উপদ্রবৰ কথা জনালে। কোম্পানি বাজাৰ ভিতৰত মানব  
উপদ্রবৰ কথা শুনি ডেভিড্‌চন চাহাব মনে মনে থাকিব নোৱাৰিলে।  
মানব অত্যাচাৰ বিলাকৰ কথা লিখি ডেভিড্‌চন চাহাবৰ বন্ধুবৰ স্বট  
চাহাবলৈ চিঠি পাঠালে। ডেভিড্‌চন চাহাবৰ চিঠি পাই স্বট চাহাবে  
তাক্ষণ্য কিছুমান সৈন্ত দি বিচাৰ্ডচন আৰু মেকমৰাণ চাহাবক পাঠালে।

(b) নগৰ সোণাই অলপমান গৈয়েই এটা অপূৰ্ণ বস্তু মোৰ চকুত পৰিল। ফলেফলে স্বশোভিত নানা প্ৰকাৰ চৰাই চিৰিকতিৰে ভৰা এখন উপবনৰ মাজত এজনী বোলবছৰীয়া দিপলিপ ছোৱালীয়ে এটা বান্দৰৰ ভৰিত ধৰি কান্দিকাত কাৰুণিক মিনতি কৰি কত কি কৈ ছৰিছে; বান্দৰটোৱে কিন্তু তাইৰ ফাললৈ পিঠি দি আৰু তাইৰ কথালৈ কাণ নকৰি আন কিবা কথা ভাবি আছে। এই দৃশ্য দেখি মই বৰ আচৰিত হলো আৰু ইয়াৰ কাৰণ কি জ্ঞানিবৰ মন গল। মোক বাট দেখুৱাই লৈযোৱা বন্ধুজনক মই সুধিলো, তেওঁ কিন্তু সেই দৃশ্য দেখি মুঠে আচৰিত নহল।

- (c) সেই নগৰত ভৈল ভীষ্মক নৃপতি।  
 পৰম ধাৰ্মিক মতি ভূতি স্বৰপতি ॥  
 নৃপকুল তিলক কামিনী মনোহৰ।  
 পৃথিবীত সমান নাটিকে ধনুৰ্দ্ধৰ ॥  
 পুত্ৰবতে কৰে ৰাজ্য প্ৰজ্ঞাক পালন।  
 আগত পাচত সত্য এংগে বচন ॥  
 চাটুৰাৰ চাটুত নেদস্ত ৰাজ্য কাণ।  
 বাৰ্ষ হুঁচি অৱশ্যে মাগিলে পাই দান ॥  
 ভুজন্ত পৃথিবী যেন ধৰ্ম ব্যৱহাৰ।  
 অহুচিতে পিম্পৱাৰো নিচিন্তত মাৰ ॥

2. Parse the underlined words in the passages in Question 1. 8  
 3. Explain with reference to the context any *three* of the following :— 15

(a) সিহঁতৰ ভৰিৰ খোন্ডৰ শব্দত শহাৰগীয়া পমীলা তাক্ষণাত সাৰ পালে।

(b) শান্তিবাম—মই বৰনগৰীয়া বৰুৱাৰ লগত থাকোঁ। মই তেওঁৰ ঘৰৰ এজন মানুহ বুলিলেও জানি নাই। তেওঁৰ লগত থাকি তেওঁৰ মনৰ ভাব নেজানোনে ?

- (c) মাধৱৰ হাতত ভাৱনা ভেল চুৰি।  
 জীৱন্তে কুমৰে লাঞ্জে আছে ভেশ জুৰি ॥  
 (d) কটকৰ গিড়ে অতি যাই ভূমিচাল।

4. Explain clearly any *two* of the following :— 14

(a) এটা লিখা প্ৰৱন্ধবহুটা পিঠি তাৰে এপিঠিৰ নাম কথা বা শুধ ভাষা আৰু আনটো পিঠিৰ নাম সাহিত্য।

(b) পদ্ম বুলিলে কেৱন ছন্দত লিখা কথাকে নধৰিবা।

(c) জ্ঞান সাহিত্য স্বৰূপ মূল।

5. Describe either the journey of *Srikrishna* from *Daraka* to *Kundin* or the marriage of *Rukmīnī* in *Daraka*. 10

6. Either, Describe the battle at *Hadirachaki*. 10

Or, Write how *Sāntirām* rescued the captives from the *Burmese*.

7. Write short sentences with each of the following words :— 5

পেতটেঙৰ, হাতলৰ, চকুচৰহা, মিঠামুখ, আঙকাণ।

8. Decline the pronoun *মই* in all cases in the singular number and the verb *খা* in *লোট*. 8

9. Explain :— 10

সংচৰিত্ৰ উদ্গতি পথৰ প্ৰবল স্হায়। যি মানুহে সংচৰিত্ৰক সাবধি কৰি উদ্গতি পথত যাত্ৰা কৰে তাক কোনো অপায়ে পৰ্শিব নোৱৰে; ধনৰ বল বা বিছাৰ বল একোয়েই চৰিত্ৰ বলৰ সমান নহয়। কুচৰিত্ৰৰ কুফল ধন বা বিছাবে খতাব নেবাৰি। ধনবস্ত আৰু বিছাবস্ত মানুহে চৰিত্ৰৰ দোষত বনাতলৈ যায়। চৰিত্ৰহীন মানুহ শত্ৰু সৰহ।

### URDU (FOR MALE CANDIDATES)

Paper-Setters— { MAULVI EKRAMUL HUQ, M.A., B.L.  
                                  ,, M. MAHFUZUL HAQ, M.A.  
                                  KHAN BAHADUR MD. YUSUF, M.A.

Examiner—SYED MD. TAHIR RIZWI, M.A.

#### COMPULSORY PAPER

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

1. Translate into English any two of the following :—

25

(a) جب برے بھائی کو معلوم ہوا کہ ان لوگوں کا سرمایہ سب ختم ہو چکا ہے تو کہا آج کل موسم اچھا ہے۔ ہوا بھی موافق چل رہی ہے۔ بہتر ہے کہ یہاں سے جہاز کا لنگر اٹھاؤ۔ اور وطن پہنچ کر اہل و عیال کی خبر لو۔ خدا جانے ان پر کیا گذری اور تمہارے انتظار میں ان بیچاروں کا کیا حال ہوا \*

(b) - ملہار راؤ ہلکر کے بیٹے سے اس کی شادی ہوئی - ابھی بیس برس کی بھی نہ ہونے پائی تھی کہ بیوہ ہو گئی - اس کا شوہر اپنے باپ کے سامنے ہی اس جہان سے انتقال کر گیا - صرف ایک لڑکا اور ایک لڑکی یادگار چھوڑے - ملہار راؤ کی وفات کے بعد اس کا پرچا جانشین ہوا \*

(c) جب سرک مکمل ہو گئی تو دائرگزر نے اشتہار دیا کہ جو انجینیر فی گھنٹہ دس میل چلنے والا انجن بنا لیا اس کو پانچ ہزار روپے کا انعام دیں گے - جارج نے بی بی اپنے بیٹے کی اعانت سے ایک انجن تیار کیا - امتحان کے روز چار انجن پیش ہوئے - ہر ایک کی رفتار دیکھی گئی \*

2. Give in your own words an account of the life of either 13  
اکبر بادشاہ or شیر شاہ سوری

3. Explain the following :-

12

(a) آب رواں کے اندر مچھلی بنائی تو نے  
مچھلی کے تیرنے کو آب رواں بنایا  
ہر چیز سے ہے تیری کاری گری ٹپکتی ۔  
یہ کارخانہ تو نے کب رائگاں بنایا

(b) جو تم شیر دل ہو تو مارو شکار  
کہ خالی نہ جائے گا مردوں کا وار  
مشقت میں باقی نہ رکھنا ادھار  
جو ہمت کر کے تو بیڑا ہے پار  
کئے جاؤ کوشش مرے دستور

4. Correct the following sentences :-

10

تم ہمارا بات مانو - ہم آج نہیں جائے گا - میرا کتاب چوری کیا - رہانہ بہت بڑی ہے - میں کھانا نہیں کھاؤں گے

5. - (a) Give the genders of any six of the following :—

6

موتی - باغ - فوج - لشکر - شہر - شربت - نصیحت - تعویذ

(b) Give the plurals of any six of the following :—

6

عورت - لڑکی - فعل - مقام - دکان - میوہ - مکان - مچھلی

(c) Form sentences illustrating the use of :—

3

دنگ رہنا - توت پڑنا - پیش آنا

6. Translate into Urdu :—

25

Hamid is a young boy. He is kind to all. The boys who attend the same school with him are very fond of him. One morning, a poor lad came to his house. He had no clothes on his back. The air was very cold. Hamid gave him some clothes. He also gave him some food.

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

10

چڑیا ہم نے عجیب پالی  
زنہجیر اس کے گالے میں ڈالی  
دن رات ہر شام یا سویرا  
لپٹی ہے وہ جیب میں بسیرا  
گویا ہے - اگرچہ بے زبان ہے  
نادان ہے مگر حساب دان ہے  
دانہ پانی نہیں رہ کھاتی  
ہر دم ہے خوشی سے چھڑاتی  
جب تک جیتی ہے جاگتی ہے  
لو کام تو چیز کام کی ہے

2. Narrate in Urdu the story of the two brothers who went to America in search of gold. 10



## 3. Translate into English :—

25

یہ بولی جو ہم تم بولتے ہیں اردو کہلاتی ہے اور یہ بولی بہت پرانی نہیں ہے۔ پرانی عربی ہے۔ اور عرب کے ملک میں جہاں لوگ حج کر جاتے ہیں اب تک عربی بولی جاتی ہے۔ فارسی بھی بہت پرانی ہے۔ اس زبان میں قصہ کہانی کی بہت سی کتابیں ہیں۔ فارسی ایران میں بولی جاتی ہے۔ یہ ملک جہاں ہم رہتے ہیں ہندوستان ہے۔ یہاں کی اصلی بولی سنسکرت تھی۔ پھر بھاکھا بولنے لگے۔ اکبر بادشاہ کے وقت میں بہت بڑا لشکر رہتا تھا۔ ان میں عرب۔ ہندوستان۔ ترکستان۔ فارس ہر ملک کے آدمی نوکر تھے اور اپنے اپنے دیش کی بولی بولتے تھے۔ مدت تک سب ساتھ رہے۔ ان کے ملنے جانے سے ایک نئی بولی پیدا ہوئی جو اردو ہے \*

## 4. Correct any five of the following :—

10

ہمارا پاس ایک گھڑی ہے۔ ہم اور وہ گیا تھا۔ ہم بولنے مانگتا ہے۔ یہ شربت بہت میٹھی ہے۔ آپ یہاں سے جاؤ۔ چاند کا روشنی بہت صاف ہے۔ لڑکا لوگ شہزادی کرتا ہے \*

5. (a) How are plurals formed in Urdu? Give some of the more important rules, with examples in each case

10

(b) Fill up the blanks :—

5

یہ لڑکا پانی — غوطہ لگاتا ہے \* دریا — پات چوڑا ہے \* لکڑی پانی — ہلکی ہوتی ہے اس لئے پانی — تیرتی ہے \* اس دریا — رنگ نیلا ہے \*

(c) Give the gender of any five of the following :—

5

درخت - جڑ - صبح - دن - کاغذ - درات - پہاڑ - برف

## 6. Translate into Urdu :—

25

A beggar saw a king and said to him, 'O king, thou art very wealthy, and hast houses and horses, lands and servants; but I who am thy brother (for Adam is our father and Eve is our mother) have nothing. Give me a brother's portion of thy wealth and property.' The king said to one of his servants, 'Give him a copper'. The beggar said, 'O king, what does this mean?'

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COMPULSORY PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. (a) Translate any three of the following into English :— 24

चाहं गई चिन्ता मिटी, मनुवा बेपरवाह ।  
जिन को कुछ न चाहिये, सोई साहंसाह ॥१॥  
जो रस नंद यशोदा बिलसत, सो नहिं तिहुं भुवनियां ।  
भोजन करि नंद अचवन कियो, मांगत सूर जुठनियां ॥२॥  
नेह दया और देहसुख, कै मिथिलेश कुमारि ।  
त्यागत मोहि कुछ दुःख नहिं, पुरजन-प्रीति विचारि ॥३॥  
जामवन्त के बचन सुहाये ।  
सुनि हनुमान हृदय अति भाये ॥४॥  
फरजी साह न हूँ सके, गति टेढ़ी तासीर ।  
रहीमन सूधी चाकते, प्यादो होत वजीर ॥५॥

- (b) Parse the underlined words in the above. 6

- (c) Give the meanings of any five of the following words :— 5

मंजुल, आर्यपुत्र, रौसपट्टी, कलुषित, वासना, अद्वैत, सञ्चय, श्रौत ।

2. (a) Correct :— 12

इनके देह की सौन्दर्य पर सब मोहित है । वे चारों भाई सुन्दर  
कपड़ा पहना है । इनको कहां तक देखा जाय । शोभा ने मन मोह  
ली है ।

- (b) Change the genders of any five of the following :— 5

खट्टा, दूती, मोर, भौजाई, देवी, मनुष्य ।

- (c) Write sentences using the plural forms of four of the following words :— 8

खटिया, बहू, हानि, पुस्तक, चाचा ।

3. Translate any three of the following into English :— 25

(a) मतापिता की सेवा सबको करनी चाहिये । उनके प्रेम का  
पूरा बदला किसी प्रकार नहीं चुकाया जा सकता ।

(b) विद्या सब गुणों में बड़ी है। जिसने उसको पाया है सभी उसके मिल हैं।

(c) ईश्वर ने दुनिया बनाई है। उसे कभी नहीं भूलना चाहिये।

(d) धर्म सच्चा साथी है। उससे किसीको दुःख नहीं होता।

4. Describe the causes which led to the failure of Dara.

15

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate one of the following passages into English :—

10

(a) लक्ष्मी जिसकी चरणाश्रिता सी हो रही है, उसका मुकुट की शोभा हमारे शब्दों में नहीं समा सकती। महाराणी जी के सुन्दर सुहावने किरीट में अनेकों महारत्नों के बीच सर्वाधिक प्रकाशमान हमारा सत्ताजित-मणि ऐसी प्रखर ज्योति से किरण विस्तार कर रही थी कि उसने तत्क्षणत् हृदय में चुभकर अपनी प्राचीन जीवनी की स्मृति को जाग्रत कर दिया।

(b) मूढ़ मानव जीवन का आधा समय सोकर बिता देता है; जीवन का जितना अवशिष्ट रहता है, उसका अधिकांश शैशव और जरा की अवस्थाएं हैं। जितना बचता है उसमें भगवान का भजन हो सकता है, परन्तु वह यौवनकाल के क्षुद्र आनन्द और प्रौढ़ावस्था के विषय-भोग में डूबा रहता है, भगवान को समर्पण नहीं करता।

2. Give in Hindi an estimate of the character of Sumat Chand.

10

3. Translate two of the following passages into English :—

(a) कृषक के जीवन में छल-कपट, मद-मत्सर और राग-द्वेष का 15  
अभाव सा मिलेगा। उसका हृदय भी विशाल होगा और वह अपने ग्राम्य भाई के कष्ट के समय जी जान से सहायता करने में तनिक भी संकोच नहीं करेगा। ग्रामों में ग्रामीणों का स्वास्थ्य अच्छा होता है। इसका कारण है उनकी अनवरत कार्य-कारिता और शीतल-मन्द-सुगन्ध पवन का सेवन।

(b) जब से टर्की में कमाल पाशा के हाथों में शासन-डोर आई है, 15  
तब से उन्होंने वहां कई मार्के के परिवर्तन कर दिये हैं। पर्दा-प्रथा का वहिष्करण भी उनमें से एक है। उनके पदों का अनुसरण अफ़ग़ानिस्तान के भूतपूर्व अमीर अमानुल्ला ने किया था, और उनकी महिषी रानी सुरिया

योरप में स्वच्छन्द रूप से भ्रमण करती रहीं। इन लोगों की देखादेखी भारतीय मुस्लिम स्त्रियाँ भी बहुत कुछ मुक्त रूप से घूमने लगी हैं, परन्तु अभी सभी घरों में इस सुधार-भाव ने स्थान नहीं पाया है।

(c) इलियस एक दूकान में काम करता था। बेचारे को मजदूरी बहुत कम मिलती थी। जीविका चलाने में बड़ी कठिनाई होती थी। अतएव उसकी पत्नी ने भी बोझ को बँटा लेना उचित समझा। घरगृहस्त्री के कार्यों से छुट्टी पाकर वह सीने का काम करने बैठ जाती थी। पड़ोस के भले आदमियों के बालबच्चों के लिये कपड़े सिया करती था। इलियस दिन-भर का हारा-थका घर लौटकर बिछौने पर लेटे लेटे वस्त्र पर अपनी की की उंगलियों की गति ताका करता था। कभी कह उठता था कि लाओ, मूँ सी देता हूँ। परन्तु पत्नी शक्ति रहते पति को कष्ट देना नहीं चाहती थी। 15

4. (a) Fill up the blanks in the following :—

5

सरोज — ऊपर जा — देखा — लीला बैठनेवाले कमरे —  
सोफा — पड़ी कोई किताब देख — है। उसकी आकृति अत्यन्त शुष्क  
—। दो ही सप्ताहों — बहुत डुबली — गई थी।

(b) Re-write the following correctly :—

12

मिस्टर राय किरण को कहे कि लीला अब कुछ अच्छा है, तुमसे मुलाकात करनी चाहती है। यह आह्वान के लिये किरण कितनी व्यस्त हो रहा था। सुनते ही उसने चल दिया। रात हो आया था। रोगी का कमरा का टिमटिमाया हुआ प्रकाश में किरण दो महीनों के बाद लीला को देखा। लीला की शरीर में आज कोई तरह का सजावट न था।

(c) Give with examples the rules for the formation of plurals of words ending in आ, both masculine and feminine. 8

5. Translate the following into Hindi :—

25

Last summer we were all lying down sick and starved, when an old man stepped in during the daytime to get a drink. When he saw us, he took pity on us and remained at our house. He gave us food and drink, and put us on our feet again. He cleared our land from debt, and bought a horse and cart for us, and left us without giving his name. Through him we found out God. Before that we lived like beasts, and he has made men of us.

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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Explain, with reference to the context, *four* of the following 24  
passages, *two* from prose and *two* from poetry :—

(a) সেই শোকাপহ কমনীয় রূপ দেখিতে না পাইয়া সহসা  
প্রাতোখান করিলাম। মনে বড় বিষাদ উপস্থিত হইল। পরে আবার  
আমি ধ্যানস্থ হইয়া তাঁহাকে দেখিবার চেষ্টা করিতে লাগিলাম, কিন্তু আর  
পাইলাম না। তখন আতুরের হ্রায় অতৃপ্ত হইয়া পড়িলাম। ইত্যবসরে  
এক দৈববাণী হইল।—“এজন্মে তুমি আর আমাকে দেখিতে পাইবে না।  
আমি যে একবার তোমাকে দেখা দিলাম, ইহা কেবল তোমার অনুরাগ-  
বুদ্ধির জ্ঞ।”

(b) এখন দেখি, এ বেগ আমার একার নহে; যে সময়ে উঠানে  
ছায়া পড়ে, নিত্য সেই সময় কুলবধূর মন মাতিয়া উঠে, জল আনিতে  
যাইবে। জল আছে বলিলেও তাহারা জল ফেলিয়া জল আনিতে যাইবে।  
জলে যে যাইতে পারিল না, সে অভাগিনী। সে গৃহে বসিয়া দেখে, উঠানে  
ছায়া পড়িতেছে, পৃথিবীর রং ফিরিতেছে; বাহির হইয়া যে দেখিতে পাইল  
না, তাহার কত দুঃখ!

(c) পদতলে অবিচ্ছিন্ন, অনন্ত, দ্বিতীয় বসুন্ধরাবৎ মেঘজাল বিস্তৃত,  
এই বাষ্পীয় আবরণে ভূগোলক আবৃত; যদি গ্রহাস্তরে জ্ঞানবান্ জীব  
ধাকে, তবে তাহারা পৃথিবীর বাষ্পীয়াবরণই দেখিতে পায়; পৃথিবী  
তাহাদিগের প্রায় অদৃশ্য। তরুণ আমরাও বৃহস্পতি প্রভৃতি গ্রহের রৌদ্র-  
প্রদীপ্ত, রৌদ্র-প্রতিঘাতী বাষ্পীয় আবরণই দেখিতে পাই।

(d) আশুতোষের হৃদয় সংগোপনে শত শত হুঃখী দরিদ্রদিগকে নিত্য আমন্ত্রণ করিত, এইজন্ত এই রবাহতের দল তাঁহার নিকট এমন করিয়া “ধন্য” দিয়া থাকিত। তাঁহার দয়া ছিল ক্ষুদ্র নদীর মত। বাহিরের নীরস ও উত্তপ্ত বালুস্তূপের ছায়াবেশে সেই দয়া নিজে লুকাইয়া রাখিত; তথাপি ভ্রমর বেরূপ সত্ত্বঃপ্রসুতিত পুষ্পের সন্ধান জানে, আর্ন্ত ও ব্যথিত হৃদয় তাঁহাকে সেইভাবে চিনিত—একটা জায়গায় যে তাহাদের আশ্রয় ছিল, তাহা তাহার মনে মনে বৃক্ষিত।

(e) রাজা তুমি নহ হে মহা তাপস, তুমিই প্রাণের প্রিয় !  
ভিক্ষাভূষণ ফেলিয়া পরিব, তোমারি উত্তরীয়।  
দৈন্তের মাঝে আছে তব ধন, মোনের মাঝে রয়েছে গোপন  
তোমার মস্ত অগ্নিবচন, তাই আমাদের দিও।  
পরের সজ্জা ফেলিয়া পরিব তোমারি উত্তরীয়।

(f) তবে যদি কৃপা কর, তুল দোষ, গুণ ধর,  
অমর করিয়া বর, দেহ দাসে স্তবরদে !  
ফুটি যেন স্মৃতি-জলে, মানসে, মা, যথা ফলে  
মধুময় তামরস কি বসন্তে কি শরদে !

(g) ছল ছল চোখে চলেছে শ্রীধর প্রতিপদে পথ টুটে,  
যতনে তাহারে ধরে’ লয়ে যায় গাঢ়োয়ালী এক মুটে।  
নিজের দীনতা ভাবিয়া শ্রীধর পারে না রোধিতে বারি,  
লাগিতেছে আজ মুকুতার মালা পাষাণের চেয়ে ভারি।  
এমনি হরির অহেতু ককণা—প্রেমের এমনি যাছ।  
কয়ল—হৃদয় গলি’ হীরা হয় তরুরও হয় সাধু !

2. Give in your own words the substance of either of the two lessons :— 10

(a) অপূর্ব আত্মত্যাগ by Musharraf Hosain.

(b) দেব ধর্ম-জাতক by Ishanchandra Ghosh.

3. Translate the following into Bengali :—

15

An artist once solicited permission to paint a portrait of the Queen. The favour was granted, and the favour was great, for it would have made the fortune of the man. A place was fixed, and a time. At the appointed time and place the Queen appeared; but the artist was late. When he did arrive, a message was communicated to him that the Queen had been there, and had left, and would not return.

A person who is unpunctual wastes not only his own but other people's time. Late comers at school delay the lesson, distracting attention and wasting the time of the teacher and the scholars.

Time lost is lost for ever. It cannot be regained. 'Time and tide wait for no man.'

4 Expand the thought contained in *either* of the following :—

15

(a) বহুমতী, কেন তুমি এতই কুপণ,  
কত খোঁড়াখুঁড়ি করি পাই শত-কণা ।  
দিতে যদি হয় দে যা প্রসন্ন সহাস,  
কেন এ মাথার ঘাম পায়েতে বহাস ?  
বিনা চাষে শত দিলে কি তাহাতে ক্ষতি ?  
তুনিয়া দ্বিষৎ হাসি' ক'ন বহুমতী—  
আমার গৌরব তাহে সামান্যই বাড়ে,  
তোমার গৌরব তাহে একেবাড়ে ছাড়ে ।

(b) যে তোরে পাগল বলে,  
তারে তুই বলিস্নে কিছু ।  
আজকে তোরে কেমন ভেবে'  
অঙ্গে যে তোর ধুলো দেবে,  
কাল সে প্রাতে মালা হাতে  
আসবে রে তোর পিছু পিছু ॥  
আজকে আপন মানের ভবে  
ধাক্ সে ব'সে গদির' পরে,  
কালকে প্রেমে আসবে নেমে,  
ক'রবে সে তার মাথা নীচু ॥

5. Re-write the following, correcting all errors :—

6

আমি তোমার জন্ম বড়ই নুচিন্তিত আছি । পত্র-পাঠ তোমার মঙ্গল চাই । গত পরশ্ব দিন শামলালের চিঠি পাইব, তখন তাহার অন্তরনের ভাব বুঝিতে পারিব । সে যাহা লিখিবে, তুমি যথা সময়ে তাহা অবিন্দিত থাকিবে । সে নিতান্ত দার্ষ শূত্র—ঠিক সময়ে কাজ না করায় শেষে চোখে একবারে হলুদের ফুল দেখে । যতাপি রামবাবু আমার ছোট ছেলেটিকে একটা বিষয় কৰ্ম্ম করিয়া দিবেন বলিয়াছেন, কিন্তু আজকাল যে দিন পরিয়াছে, তাহাতে তাঁহার কথায় সম্পূর্ণ ভাবে নির্ভরসা করিতে পারি না । তুমি প্রত্যন্তর দিতে গৌণ করিস্ত না ।

6. Reproduce from memory any six consecutive lines from *one* of the following poems :—

6

(a) জন্মভূমি, by Dwijendralāl Roy ; (b) সখা, by Rajanikānta Sen ; (c) গান, by Atulprasād Sen.

7. Fill up the blanks in the following :—

4

তাহার কথার উপর তুমি—স্থাপন করিলে কেন ? সে চিরকাল—  
ভঙ্গ করিয়া আসিয়াছে । তাহার উপর এরূপ—কাজের ভার দেওয়া  
তোমার—হয় নাই । এখন যদি শেষ মুহূর্ত্তে তাহাকে না—দায়, তবে



যল, কাহাকে দিয়া—সমাধা করিব ? এই ভাবে একজন—প্রকৃতির  
লোকের কথায় নির্ভর করিয়া তুমি—কাজ করিয়াছ ।

8. Write an essay in Bengali on one of the following subjects :—

20

(a) Some good book you have read and enjoyed—a description of the book—the reasons why you like it.

(b) Your native village or town—its people—its surroundings and local conditions—how these can be improved.

(c) Some great man about whom you have read and whom you admire—his work and achievement—the lessons we can learn from his life.

### HINDI VERNACULAR

*Paper-Setters*—{ Mr. NALINIMOHAN SANYAL, M.A.  
                                  ,, DINANATH MISRA, M.A., B.L.

*Examiners*—{ Mr. SIBNARAYAN LALA, A.I.S.A.  
                                  ,, LALTAPRASAD SUKUL, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Explain any two of the following with reference to the context :—

(a) हर-कोदंड कठिन जिन भंजा । 8

तोहि समेत नृपदलमदगंजा ॥

खरदूषन लिसिरा अरु बाली ।

बधे सकल अतुलित बलशाली ॥

जाके बल लवलेख ते, जितेउ चराचर झारि ।

तासु दूत मैं जाहि की, हरि आनेहु प्रिय नारि ॥

(b) “नित बन-गजन डरावन हेतू । 8

“राख्यो गुहा मोहिं वृषकेतू ॥

“जानि समय मम क्षुधा निवारन ।

“भेजी नाथ मोहिं यह पारन ॥

“अहो भूप गुरु-पद-अनुरागी ।

“अब फिरि जाहु काज सब त्यागी ॥”

(c) कै पिय पद उपमान जानि एहि निज डर धारत । 8

कै मुख करि बहु भृङ्गन मिस अस्तुति उच्चारत ॥

कै ब्रज तिय गन बदन कमल की शलकत झाई ।

कै ब्रज हरिपद-परस-हेत कमला बहु आई ॥

कै साविक अरु अनुराग दोउ ब्रजमण्डल बगारे फिरत ।

कै जानि लक्ष्मी-भौन एहि करि सतधा निज जल धरत ॥

2. *Either*, To what place did Lakshman take Sita? Write what you think of Rāma's conduct in banishing Sita. 8

Or, Who is known as the father of modern Hindi literature? What are his most important works? 8

3. Explain any two of the following passages with reference to the context :—

(a) प्रभात में पक्षी कलज्वनि करते हैं, महाराना समझते हैं कि मीरा गा रही है। सरोवर में पद्म खिलते हैं, तो वे देखते हैं कि मीरा हंस रही है। वायु से लताएं हिलती हैं, तो उनको बोध होता है कि मीरा उन्हें भुजाएं उठाकर बुला रही है। 8

(b) कहते हैं कि हज़रत याकूब ने एक बेर इसी पत्थर को सिरहाना बनाकर उस पर शयन किया था, और सोते समय स्वप्न देखा था कि, स्वर्गीय अप्सराओं ने एक स्वर्ण सोपान लगाया है, और वे उस पर से स्वर्ग-मर्त्य का आवागमन करती हैं। 8

(c) धन के साथ ही संकट है। सम्पत्ति विपत्ति का मूल है। धर्म-धन का निरादर कर पार्थिव-धन के सञ्चय करने का यहो परिणाम होता है। मैं तो उसी दिन से डर रहा था कि, कुछ न कुछ अनिष्ट अवश्य होगा। 8

4. Translate one of the following into Hindi :—

(a) There is only one cure for the evils which newly-acquired freedom produces, and that cure is freedom. When a prisoner first leaves his cell he cannot bear the light of day; he is unable to discriminate colours or recognize faces. But the remedy is, not to remand him into his dungeon, but to accustom him to the rays of the sun. 15

(b) But as for me, I lie upon the forest leaves, and, having nothing which requires guarding, close my eyes in tranquil slumber; whereas had I gold to guard, that would banish sleep. The earth supplies me with everything, even as a mother her child with milk. I go wherever I please, and there are no cares with which I am forced to cumber myself against my will. Should Alexander cut off my head, he cannot also destroy my soul. 15

5. Fill up the blanks in the following :— 2

भारतवर्ष में सिनेमा — काफ़ी प्रसिद्धि — । नगरवासी जनता इस — खूब दिलचस्पी लेने — है। सिनेमा-घरों — सामने शाम को खड़े — कर देखने से — बात का पता — है।

6. Give very briefly, in simple Hindi, the main ideas contained in the following :— 15

यदि सुखी रहने की इच्छा हो तो इच्छा का ही पूर्ण त्याग करो। सब वाञ्छित पदार्थों के मिलने पर भी मनुष्य इतना सुखी नहीं रह सकता जितना तब रहता है जब उसे किसी प्रकार की इच्छा वा चाह नहीं रहती। री तृष्णे, अब मैं स्वतंत्र हुआ, अब तेरा दास नहीं हूँ।

7. Re-write the following correctly :—

8

अशोक बौद्ध धर्म को फैलाने के लिये बहुत उपाय किये थे। वे स्थान स्थान पर शिलालेख खुदवा दिये थे जिन में बुद्धदेव का सिक्का लिखा हुआ था। उन का राज्य में कोई, जीव का हत्या नहीं करने सकता था।

8. Write a short essay in Hindi on any one of the following subjects :— 20

- (a) Village life.
- (b) Honesty is the best policy.
- (c) The Holi festival.

### MAITHILI VERNACULAR

*Paper-Setters*—{ PANDIT BABUA MISRA.  
KUMAR GANGANANDA SINHA.

*Examiner*—PANDIT BABUA MISRA

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Describe in simple Maithili the part played either by Mantharā in the banishment of Rāma or by Śakuni in the banishment of the Pāṇḍavas. 15

2. Explain, with reference to the context, any two of the following passages :— 15

- (a) आगँ हम पाछाँ अहाँ, सीता माझहि ठाम ।  
ब्रह्म जीव माया जेहनि, चलु दण्डक बन नाम ॥
- (b) अये ईसी चिन्ता चित परिहरु सुस्थिर रहू ।  
वियोगे व्यग्रा की विरह दिन भीरा अँह सहू ॥  
विशालाक्षी देखू अछि न शिशुता अङ्ग धयले ।  
सुशीला साध्वी छी निकट छथि प्राणेश अयले ॥
- (c) लक्ष्मी थिकि खपछा छाया सनि तन तारुण्य तरङ्गे ।  
स्वप्नोपम वनिता सुख तेहन मन अभिमान अमङ्गे ॥  
दिनकर देव गतागत घटइछ आयु क्रमहि जन तन सौ ।  
अनकर जरामरण काँ देखथि किछु नहि बूझथि मनसौ ॥

3. Either, Write what you know of the story of Sukanya. 10

Or, Annotate any two of the following passages :—

- (a) शाळि गोप गीतिका सुप्रीति रीति सुनि सुनि ।  
खेत शय्य खाथि नेँ कुरङ्ग आँखि मूनि मूनि ॥  
सत्य तीरहुति यज्ञभूमि पुण्य देनिहारि ।  
शास्त्र कैँ बजैत बैस कीर बैसि डारि डारि ॥
- (b) कयल उपद्रव सभ जनक, देखता भलेँ जमाय ।  
दे'गरा पोठी चाल दै, रोहुक शीर विसाय ॥
- (c) लक्ष्मण कहल सरोष सुनि, भृगुपति मति अति छोटि ।  
पर्वत मध्ये ठेकलैँ, भांगिय घरक सिछौटि ॥

4. Amplify in Maithili the idea contained in the following :— 15

O world, be nobler, for her sake !  
If she but knew thee what thou art,  
What wrongs are borne, what deeds are done  
In thee, beneath thy daily sun,  
Knowest thou not that her tender heart  
For pain and very shame would break ?  
O world, be nobler, for her sake !

5. Translate into Maithili :— 13

During the North American Indian War of 1855 one of the most daring acts was that of a boy named Goodman, fifteen years old, so young and yet so brave that his name is honoured by all of British stock and even by the Indians themselves.

He belonged to a family who, when the eastern states became over-populated, decided to move west, and, enchanted by the beauty of Paget Sound, settled on its shores, north of California, on the Pacific coast. Our hero was but nine years old at that time, but he could use his bow and arrow and his rifle as well as many older than himself, and could manage the paddle as well as any Indian.

6. (a) Construct a sentence in Maithili to illustrate the use of the following *samāsas* :— 10

- (i) तत्पुरुष । (ii) कर्मधारय । (iii) बहुव्रीहि । (iv) द्विगु ।  
(v) द्वन्द्व ।

- (b) Use हार with five different prefixes (उपसर्ग) and illustrate their use.

7. Write an essay on one of the following subjects in Maithili :— 20

(a) Charity :—(i) Its essence and right use. (ii) Its religious and humanitarian significance. (iii) Its abuses. (iv) Conclusion.

(b) Electricity :—(i) How men's knowledge of electricity began to grow. (ii) Its developments and utility in the modern world. (iii) Its future in India.

## MODERN TIBETAN VERNACULAR

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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passages into Modern Tibetan :—

40

(a) At this advice the king was highly delighted and worshipped God; he offered cakes to eight classes of spirits; and gave gifts to the poor and destitute. A short time thereafter the highly accomplished queen named Geden-Zangmu, who was amiable with all and immune from the eight defects of womanhood, saw in an auspicious dream that a son would be born to her. She went to the presence of the king and said: 'O great king, lord of men, pray heed me. I sleep from daytime through the whole of the night and saw a happy dream. I dreamt that from the 300 veins and arteries of my body emanated a supremely blessed wheel, with a golden Vajra which touched the zenith of the heaven; and the pencils of rays fully covered the ten directions, and a pavilion was formed in the firmament by the rainbow and the light.'

(b) At this supplication of his 'Tara Sundara,' all the king's ministers having held councils, the prince took as bride the beautiful and brilliant princess Mendey Zangmu, loved by all, daughter of Chandra-Bhadra, King of Padmachen. The bride humbly bowed to the prince with her hands placed on the crown of her head, as before a lama, and thus praised him with a heart filled with rapture: 'O prince, untouched by sin and a peer of the Bodhisattvas, far surpassing the merits possessed by all other beings, thou art possessed of wealth and majesty inconceivable by men. Thou art like the gem which accomplishes all things desired by one's heart. Having seen the paramount overlord, Zangmu is pleased and her heart filled with immeasurable delight.'

2. Explain the following extracts in Modern Tibetan :—

20

(a) མི་བདག་བདང་ནས་ཁོང་བར་ཕྱིན། ཁོང་བ་བདང་ནས་ཚམས་ཀྱན་བཞེད། གཤམ་  
ཆར་ཉམས་པ་བྱོད་ཀྱིས་ཀྱང་། གཉིས་ཉམས་ང་ལ་འཇུག་ཞིང་དགོད།

(b) འདུས་བྱས་ཐམས་ཅད་མི་དག་པར་འདུག་པས་གང་ལ་ཡང་སྦྱང་པོ་མེད་པ།  
ས་རིག་མོངས་པ་པ་པ་ཉི་ཉིད་དང་འདྲ། ས་པོན་འདིབས་པའི་ཕ་ནི་འདྲ་དང་འདྲ། མགྲོན་  
པོ་ཚེགས་དང་འདྲ་ཞིང་སྦྱང་པོ་གང་ཡང་མི་འདུག་གོ།

འཇིག་རྟེན་བྱ་བ་འདི་ནི་སྤྱ་ས་མཁན་གྱིས་བསྟུ་བ་དང་འདྲའོ།

8. Correct the following :—

10

དུས་གསུམ་ཕྱི་བཞེན་ཐམས་ཅད་ཀྱི་བའི་ཡུམ། རྩ་མེད་བཞི་བའི་མ་འོ་མ་རྩྭ་  
ཆུ་བའི་དཀྱིལ་དཀོས་འདོད་རེ་སྒྲོང་འབྲས་བྱ་སྒྲིན་པའི་ས།

4. Write what you know about “ལ་ཡ་ཡུ” and the moral in Modern Tibetan. 10

5. Conjugate the following words in all the tenses :—

10

འགྲུབ་པ། ལྷུབ་པ། འདོན་པ། ཡང་བ།

6. Write in not less than fifteen lines a Tibetan letter (in Modern Tibetan) to your father about your examination. 10

## ORIYA VERNACULAR

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Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Translate into Oriya one of the following passages :—

15

(a) The ostrich can run so fast that a swift horse cannot overtake it. It spreads out its wings, flaps them in the wind, and away it goes at full speed; but instead of moving straight on it runs round and round in a circle, by which means it tires itself and is caught after a chase of eight or ten hours. Though a very strong bird it is timid, and when it finds there is no hope of escape it will often quietly submit to death. Sometimes, however, it defends itself by kicking, and the force of its claws is so great that they have caused death. In a wild state it takes into its stomach large pebbles to help its digestion; in captivity it swallows bits of wood, metal, glass, or any hard substance, probably with the same object.

(b) But why should one man rule, asked Yudhisthira. At first answered Bhishma, there was no king, all men righteously protecting one another, but as men became covetous, kingship became necessary for protection and the Gods gave celestial men to be the rulers; later men of great merit were reborn on earth as kings, and obedience was gladly rendered to one seen to be superior. Hence was it said that there was no difference between a God and a king. After explaining the four orders and the four modes of life, Bhishma pointed out that all these had their root and place in kingly duties, and the king was the protector of all. Anarchy was the worst possible state, and no one should dwell in kingdoms torn by anarchy.

2. (a) Write a note on either ଚାନ୍ଦିନୀ ସାହିତ୍ୟ or 10  
ପୁରୁଷରାବ ଏବଂ ନାରୀରାବ ।

(b) Sketch the character of ଚନ୍ଦ୍ରମୟୀ as it is given in 10  
ରଘୁବଂଶ

3. Explain fully in simple Oriya one of the following extracts :— 10 .

(a) ଯାହାର ସାଗରୋପମ ଅନନ୍ତଗର୍ଭମଧ୍ୟରେ ଜୀବମାନେ  
ମୀନାଦି ଜଳଚର ସଦୃଶ ଅବସ୍ଥାନ କରୁଅଛନ୍ତି; ଯାହାର ମୁହଁଲୋଲ ବନ  
ଏବଂ ଉପବନମାନଙ୍କର ପତ୍ରାବଳି ଏବଂ କୁସୁମରାଶିକୁ କମ୍ପିତ କରି ଏବଂ  
ନାସାଦର୍ପଣଦ୍ୱାରା ପରିମଳ ବହନ କରି, ପ୍ରଣୟି ତ୍ରିନୋଗିତ ଯନ୍ତ୍ର ସହଜରେ  
ପରିଗ୍ରାହ୍ୟ ଜୀବମାନଙ୍କର ସନ୍ତାପ ଅପନୋଦନ କରୁଅଛି, ଯେଉଁ ପ୍ରଗଢ଼ନ  
ରସ୍ୟଙ୍କର ବେଶରେ ପ୍ରକାଶିତ ହୋଇ ଘୋରରେଇବ ନାଦରେ ସମସ୍ତକିଶ୍କୁ  
ଆତଙ୍କାହୁଳ କରି ଅଟଳଗିରିଶୃଙ୍ଗକୁ ସୁଦ୍ଧା ବିଦୀର୍ଣ୍ଣ କରୁଅଛି . . . . ସେହି  
ବାୟୁରାଶି ବିଷୟ ଆଲୋଚନା କରିବା ବିଦୃଶ କୌତୁହର ବିଷୟ ।

(b) ଗୋହର ମହିମା ଗୁଣେ ଦୁଧଲୋକ ରୁଲୋକ  
କୋଟି ବିଘ୍ନ, କୋଟି ସୂର୍ଯ୍ୟ, କୋଟି ଚନ୍ଦ୍ର ତାରା,  
ଅଗଣିତ ଜୀବରାଶି ସ୍ବବ୍ୟ ବିଷ୍ଣୁୟେ ।  
ସେ ମହିମା କ୍ଷୁଦ୍ର ମୁହିଁ କେମନ୍ତେ ବୁଝିବି,  
ମୋହର ଏ କ୍ଷୁଦ୍ର ଆତ୍ମା ବିଷ୍ଣୁୟେ ସ୍ବବ୍ୟ  
ରସେ ଅବସନ୍ନ, ଆଜି ସେ ମହିମାଚରୁ  
ଆବୁଲେ ଲୋଡ଼ଇ ଆଶ୍ରା ତୋ ଅନନ୍ତପ୍ରୋତ୍ତେ/

4. Re-write the following avoiding all inelegant words and correcting all errors :— 10

ଆମେ ସବୁ ଗନ୍ଧକୁ ପୁରିକୁ ଯିବାକୁ ଠିକ ଠାକ କରିବୁ । ଆମ ଜେଜବାପାଙ୍କ ସାହାଯ୍ୟ ନ ଯାଇଲେ ବାପା ଯିବାରେ ନିଶ୍ଚିନ୍ତ ମନ ଦେଇ ପାରିବେ ନାହିଁ । ଜେଜେ ମାଙ୍କ ସମ୍ମତରେ କାମ ହୁଏ ବଳି ବାପା କହନ୍ତି । ବୁଢ଼ାଙ୍କ ସୌଜନ୍ୟତା ରାବିଲେ ସାମ୍ବର୍ଣ୍ଣ୍ୟ ହେବାକୁ ପଡ଼େ । ଆମେ ଏକାବେଳିକି ହତାଶା ହେଉନୁ । ମା ଆରୋଗ୍ୟ ହେଲେ କଥା ଆଦ୍ୟପାନ୍ତରୁ ପଡ଼ିଯିବ ।

5. (a) Use any four of the following in sentences bringing out the sense contained in them :— 10

- (i) ତୋର ଶୋଳକୁ ବାଦଶୋଳ ; (ii) ଧାନବଉଳାବନ୍ଧୁ ମଉଳା ;  
(iii) କୈବ୍ୟ ଚାଉଳ ପଥ କରେ ; (iv) ଯେତେ ବାଞ୍ଛିତ ତେତେ ଯୋଗ ;  
(v) ଖୋଳ ପର୍ବତ ମାର ମୁଣ୍ଡା ; (vi) ଆ ବଳଦ ମୋତେ ଚିନ୍ତି ।

(b) Use in sentences the causative forms of any five of the following 5  
verbs :—

ଆର୍ଦ୍ଧବା, ହୁଟିବା, ମାପିବା, ପାଇବା, ବଳିବା, ପଡ଼ିବା, ଦେଖିବା ।

6. Clearly bring out the idea contained in one of the following 10  
stanzas :—

- (a) କାର ଯୌଷମାସ କାର ବଂଶ ନାଶ ସିନା ଏ ସଂସାର ଗତି ;  
ବିବା ଖଳମତି ସର୍ପବୋଲି ଏହା ଦୈବଦଣ୍ଡ ତାହା ପ୍ରତି ।  
ବିଧିର ବିପାକ ସହିତ ରୁଚିତ ପଥେ ଘାଟେ ଛବି ରହେ  
ସୁଯୋଗ ପାଇଲେ ନରପୁଂପଦର ବିଷ କୋପେ ପ୍ରାଣ ଦହେ ।  
ପାପର ଉଚିତ ଦଣ୍ଡ ପାଇ ଦୁଷ୍ଟ ନ ଛାଡ଼େ ନିଜ ଦୁର୍ଗତି  
ପ୍ରବଳ ଗର୍ବଣା ସହି ସେ ଦୁର୍ବଳେ ଗଢ଼େ ଏ ସଂସାର ଗତି ।



(b)      কীৰন কঞ্চক্ৰে গ্ৰেপৰ বৰ্ণ  
 ঘূৰি অকালে চলে পৰে বৰ্ণ ।  
 নৈৰাশ্যে বৰ্ষা হুণ্ড আশাৰি চাৰ  
 'কুহু' বৰ্ষাৰ বৰ্ষা গাৰিৰ ঘাৰ ।  
 থাৰি বৰ্ষা ন মা আৰে অৰ্জ  
 মৰাণ্ণৰ বৰ্ষা এ বৰ্ষাৰ

7. Write an essay on *one* of the following subjects :—

20

- (a) The duties of a pupil towards his teacher.
- (b) The rainy season in India, its effects on the minds of the people.
- (c) The village doctor.
- (d) Your idea of a happy life.

### ASSAMESE VERNACULAR

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*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Answer *one* of the following questions :—

13

(a) Write in your own words the story given in *Sārathi* to illustrate the following remark :—

এজনৰ কৰ্তব্যবোধৰ গুণত সহস্ৰ মানুহৰ প্ৰাণ বৰ্কা পৰা, এজনৰ  
 কৰ্তব্যবোধৰ গুণত এক দেশৰ স্বাধীনতা বৰ্কা পৰা, এজনৰ কৰ্তব্যবোধৰ  
 গুণত অসাধ্য কাম সাধন হোৱা বুৰঞ্জীত বহুত পোৱা যায় ।

(b) Describe the evil consequences of *either* procrastination  
 (হাম্বাহি) or of intoxicating drugs (বাগিয়াল বস্তু).

(c) Write a short essay on the best means of maintaining health  
 and sanitation as mentioned in *Sārathi*.

(d) Briefly mention the advantages of studying books and nature.

2. Answer *one* of the following questions :—

13

(a) Briefly mention the noticeable features of the poems of *Sādari*.

(b) Which is your favourite poem in *Sādari*? Give reasons.

(c) Show how the poem বহাগীৰ বিয়া fittingly describes the natural beauties of the spring season.

(d) Write a short essay on Sankardeb introducing the ideas of the poem ত্ৰিশঙ্কৰদেৱ ।

3. Explain *two* of the following passages with reference to the 5+5 context, selecting *one* passage from each group :— =10

GROUP A

(a) মাছৰ কণী হাজাৰ, মিহাৰ কণী অলেখ ।

(b) সূচৰিত্ৰ মনুষ্যত্বৰ সাৰ, এতেকে সি মেকদণ্ডৰ নিচিনা ।

(c) উদ্গতিৰ পথত বহুত হল-জোং আছে, আকাংক্ষাৰ চোকা বাগীত পৰি মতলীয়া নহলে কোনেও তালৈ বেগেতে আগ নাবাঢ়ে ।

GROUP B

(a) নলঙ ডিঙিত আৰি সম্ভৱৰ মালা  
ভাবোঁ তাক এতি হেয় বুলি ;  
অপমান অপযশ লাঞ্ছনা শিৰত  
লম প্ৰভু আগ্ৰহেৰে তুলি ।

(b) বনৰ বিহগ তুমি প্ৰেমৰ ভিখাৰী,  
মানুহৰ বাতিনীতি  
হুদিনীয়া স্নেহপ্ৰীতি  
সকলোকে নেওচা দি হ'লা বনচাৰী ।

(c) কণ বস গন্ধ পৰণ প্ৰেমত  
জিনিগি পিয়াৰা হিন্দুস্থান,  
বাদছা হেৰেম কৰি গুলজাৰ  
দিল দৰিয়াত তুলিগি বান ।

4. Give the precise meanings of *four* of the following words :—

4

প্ৰভুত্বপন্নমতিত্ব, ধামধুমীয়া, অলুটুপীয়া, ধূৰ্ণাখুলীয়া, লাকটিপাকটি,  
বৈতবণী, পানীগছা, পঞ্চশৰ, ললন্তিকা বৈজয়ন্তী ।

5. Re-write *five* of the following words in their correct forms :—

5

জোৰহাত, শোনিডপুৰ, সশ-মংশ, বাতকয়া, দাজবিয়া, জিৰণৰ সমতা  
হুলনীবাড়ী, পাছে-পড়ে, হলটুগ, তাকবিয়া ।

6. Frame sentences using five of the following expressions :—

5

কুহুমবুলীয়া, বৈ-বজ্জহ, ভিকাছন, টিঙ্গিবি-তুলা, অগ্নি শৰ্ম্মা বিলতীয়া, কটনা কটা, বাজ-ভগন, পবালি পবা সাতামপুকখীয়া, বাপতি-সাহোন।

7. Give, in Assamese, the substance of one of the following passages :— 15

(a) বৰ্ত্তমান যুগত জাতীয় ভাবে ভাৰতবাসীৰ মনৰ পৰা প্ৰাদেশিক লক্ষীৰ্ণতা বহু পৰিমাণে ওচাইছে। আগেয়ে নিজ প্ৰদেশৰ হিতসাধনেই দেশৰ প্ৰেষ্ঠসেবা বুলি মনা হৈছিল। এতিয়া প্ৰদেশৰ মঙ্গল-কাৰ্য্য ভাৰতব হিতসাধনৰ লগত অভিন্নভাৱে মিলি চলিছে। এজন ভাৰতবাসী কোন প্ৰদেশৰ মানুহ, বাহিৰৰ সাজপাৰৰ পৰা অমুমান নকৰিলে কাৰ্য্যৰ পৰা চিনি উলিয়া টান। শিক্ষিত মানুহ এজনে আত্মগোপন কৰেওঁ বুলিলে তেওঁৰ প্ৰদেশ নিৰ্ণয় কৰা সহজ নহব। কিন্তু চ'তৰ শেষত বিহুৰ কথা উলিয়ালে হুখ-ডাৱৰে ঢাকি থকা মলিন মুখতো যদি প্ৰথম-জ্ঞানৰ দৰে অকণ ধুনীয়া হাঁহি, নোলায় তেন্তে জানিবা নিশ্চয় তেওঁ অসমীয়া নহয়; অসমীয়া বোলালেও তেওঁৰ অন্তৰন অসমীয়া ভাব বা অসম-প্ৰীতি নাই, তেওঁ আচলতে বহুবা। অসমবো অংশীদাৰ ওলাব পাৰে, কিন্তু বিহুৰ ভাগ বিচৰা কেবল অসমীয়াহে।

(b) অসমীয়া, তুমি যেতিয়ালৈকে দেশৰ বাণিজ্য তোমাৰ হাতলৈ আনিব নোৱাৰা তেতিয়ালৈকে কোনো কাৰ্য্যই তোমাক ৰক্ষা কৰিব নোৱাৰে। তুমি বীৰ, তুমি সাহসী হব পাৰা, তুমি স্বাৰ্থত্যাগী হৈ সকলো এৰিব পাৰা, অনাহাৰ ব্ৰত ধৰি মৃত্যুৰ লগত ধেমালি কৰিব পাৰা, তুমি পোতাশালত বন্দী হৈ অকাতৰে শাস্ত লব পাৰা, হুখ-ক্লেণ ইত্যাদি কৰিব পাৰা, তোমাৰ অদ্ভুত কাৰ্য্যেৰে জগত চমকাব পাৰা, ভাৰতে তোমাৰ যশোগীত গাব পাৰে, কিন্তু দেশ আৰু জাতিক ৰক্ষা কৰিব নোৱাৰা। দেশৰ বাণিজ্য আনৰ হাতত সমৰ্পণ কৰি নিজে বীৰ-বীৰেন্দ্ৰ হলেও দেশ ৰক্ষা নপৰে। চাৰিও ফালৰ পৰা বিদেশীয়ে আহি অসম দেশ আঙুৰি ধৰিছে। সিবিলাকৰ পৰা জাতিক মুক্ত কৰিবলৈ এটা মাথোন বাট আছে, সেয়ে হৈছে বেহা-বেপাৰৰ ব্যৱস্থা কৰা। ইয়াতেহে অসমীয়াৰ গোটেই শক্তি বল-বুদ্ধি অৰ্পিব লাগিব।

8. Translate into Assamese one of the following passages :—

15

(a) Every nation has certain good qualities with the help of which it rises to glory and power. Every eclipse or downfall to which the nation is subjected is due to the misuse or loss of those good qualities : and it can regain its past glory only by reviving and strengthening them. The Assamese were at one time famous for their earnestness, patriotism and love of duty. The decay of these high qualities led to quarrels and jealousies between brothers and relatives, between families and clans, and between one section of the race and another; and it has been ultimately responsible for their present misery and degradation. It is the duty of

every Assamese man and woman to revive and cultivate these noble traits of theirs if they want to rise higher in the scale of civilization.

(b) The greatest Ahom King of Assam was Swargadeo Rudra Singha. He was the son of Princess Jaymati and Maharaja Gadadhar Singha. Rudra Singha made up his mind to uplift his subjects and to raise Assam to the rank of a great kingdom of India. He encouraged poets to translate good Sanskrit books into Assamese. He encouraged music and he himself wrote a number of Assamese songs. He fetched expert architects from Hindustan for constructing the buildings and temples of his new capital Rangpur. He erected the temple of Jaydoul near the place where his mother was punished with death; and the stone images set on the body of that temple are nowhere to be seen. Rudra Singha deputed men to other parts of India to learn the good things of those places so that they might be introduced into Assam. He was a great warrior. He conquered Cachar and Jyanta, and subdued other neighbouring tribes. He made preparations to conquer Bengal, and for this purpose he advanced with a large army to Gauhati, where unfortunately he died in 1714 A.D.

9. Write a short essay in Assamese on one of the following subjects :— 20

- (a) The life of an Assamese cultivator.
- (b) A visit to a railway station at the time of arrival or departure of a train.
- (c) The Post Office and its utility.
- (d) One of the following celebrities of Assam :—Bhola Nath Borovah, Purnananda Buragohain, Monaitamuli Barbaruah, Mulah Gahharu, Princess Amritaprabha, Radhika Sati.
- (e) Assamese weaving.
- (f) The present economic depression as far as Assam is concerned.
- (g) Trade and commerce among the Assamese.

## MODERN ARMENIAN VERNACULAR

*Paper-Setter and Examiner*—MR. ZEBEDEE HANANIAN.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Modern Armenian :—

30

Thoughtfulness, kindness, and consideration for others, will always repay themselves. They will produce a grateful return on the part of the objects, and services will be performed with a willingness and alacrity which more money could never secure. Sympathy is the true warmth and light of the home, which binds together mistresses and servants, as well as husband and wife, father, mother, and children; and the home cannot be truly happy where it is not present, knitting together the whole household in one bond of domestic affection and concord.

2. Compose short sentences in Modern Armenian to illustrate the use of the following words :— 20

Պատարներ, նախերգանք, մտածումով, թափանցել,  
կաշկանդումից, ինքնուրոյն, գոտանական, խնամակալ, կուտա-  
կումներ, տոհմային :

3. Write an essay in Modern Armenian on any one of the following subjects :— 50

(a) Վիճակների կրթական վիճակի մասին :

(b) Ինչ է դպրոցի նպատակը.

(c) Թատրոնի կատարած դերը ընկերային կեանքում.

(d) Տիպար նկարագիր.

(e) Խաչատուր Մարգարիտի կեանքն ու գործունեությունը.

(f) Սիմոն Երեմյանի կեանքն ու գործերը.

## GUJARATI VERNACULAR

Paper-Setters—{ DR. I. J. S. TARAPOREWALA, B.A., PH.D.  
PANDIT HARGOVIND DAS SETH.

Examiner—PANDIT HARGOVIND DAS SETH.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

૧. નીચે લખેલા મથાલાવાલી વાતઓ પૈકી એકને તમારા ચેતાના 15  
સાધનોમાં લખો:—

- (ક) રાજ અને રખારી,
- (ખ) નાસાગ,
- (ગ) દુર્યોધન અને અર્જુન.

૨. નીચેના ફકરાનો સારાંશ લખો:— 10

ભક્તિ એ કેવળ હૃદયનો ભાવ નથી. પણ એ ભાવ સાથે એ ભાવને અનુરૂપ એવો આચાર છે. જે ભક્તિ સેવારૂપે પ્રત્યક્ષ નયાય એ ખરી ભક્તિ નથી. માટે ખરો સ્વદેશ ભક્ત એજ કેજે દેશની યથાશક્તિ સેવા કરે— પ્રેમ બલિતો નથી, પણ કરીબ તાવે છે. એકલુ ભૌખિક સ્વદેશાભિમાન કાંઈજે કામનું નથી.

૩. નીચે ઉતારેલી કડીઓનો અર્થ લખો અને તે તમારા પાઠ્ય પુસ્તકમાં 15  
કયે સ્થળે આવે છે તે બતાવો:—

- (ક) સગુણતા છે નહિ મહારે, ધરૂં નહિ સ્વાર્થ તલભારે;  
મને જેવા મળે સંગ, બને તેવા બધા દંગ,
- (ખ) તૈલ વિના રકુટ તિલ પૂરેથી દીપક જ્યમ પ્રગટાય;  
અકટ પાવક વિના કાષ્ટને ભેટે, શીષેરે શીત સમાય.
- (ગ) મોટાભણી જઈએ શરણ, દે ધાત તો પામીએ મરણ;  
ધરનો દિવાન બાહી આપ, તો તે દુઃખ ઠાને કહેવાય.

૪. નીચેના શબ્દોનો અર્થ લખો અને તે હરેકને તમારા પોતાના બનાવેલા 10  
જુદા જુદા વાક્યોમાં વાપરી બતાવો :—

(નર્લનજતા, નિમકહુલાલી, અલૌકિક, અરાજકતા, સામાન્ય.

૫. નીચલામાંથી એક પર એક નિબધ લખો :—

20

(ક) માતા,

(ખ) વર્ષા ઋતુ,

(ગ) ઘોડો.

૬. “માણસજ માણસના મનને આકર્ષે છે ; માનુષ જીવિત નાસબંધમાં 15  
જે કાંઈ હોય, મનુષ્યના જેજે અનુભવ — આનંદ, શોક, પરાક્રમ ઈત્યાદિના  
પ્રરંગ — હોય તે ઉપરજ માણસનું મન ખીલ કરતાં વધારે ખેંચાય છે.  
તેને તેમાંજ કાંઈ વિશેષ રમુજ પડે છે. એજ કારણથી જીવનચરિતા  
વાંચવા ઉપર માણસને વધારે પ્રીતિ રહે છે. વાર્તા અને કથાની ચોપડી-  
ઓનાં આટલાં બધાં ધરાક થાય તોજેનું કારણ પણ એ જ છે. વાર્તા તે  
કલ્પિત જીવન ચરિત્ર છે.”

ઉપલેા ક્રકરો તમારા પોતાના શબ્દોમાં બરોબર સમજવો.

૭. નીચલાનો ગુજરાતીમાં તરજુમો કરો :—

Coming home from school one day, along the river path, 15  
Billy noticed a little figure playing dangerously near the water's edge.  
It was Tony, the Major's grandson and the treasure of his grandfather's  
heart. Billy shouted to the child to step back, but the boy did not  
hear, and the next moment he was in the water. Billy rushed to  
the scene of the accident, and, kicking off his shoes and taking off his  
coat, dived in. The river at this spot was dangerous, but Billy was  
a powerful swimmer.

## TAMIL VERNACULAR

*Paper-Setter and Examiner*—RAO BAHADUR L. K. ANANTHA-  
KRISHNA IYER, B.A., L.T.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. (a) Write a short account of the birth of Drona and Bhishma. 5
  - (b) State what you know about the marriage of Draupadi. 5
  - (c) Give briefly the substance of *Neethi Neri Vilakkam*, and 10
- Sakala Mata Valli Malai*. Who are the authors of these two works?

2. Give in plain Tamil the meaning of the following verses :— 15

(a) இவறன்மை கண்டு முடையாரை யாரும்  
குறைவிர்த்துத் குற்றேவல் செய்ப-பெரிதூந்தாம்.  
முற்பகளுலாதார் நோற்றாரைப் பின்செல்லல்  
கற்பன்றே கல்லாமையன்று.

(b) கற்றோர்க்குக் கல்வி நலனே கலனல்வால்  
மற்றோரணிகலம் வேண்டாவாம்-முற்ற  
முழுமணிப் பூணுக்குப் பூண்வேண்டாயாரே  
அடிக்குக் கழகுசெய்வார்

(c) முற்றுமுணர்ந்தவரில்லை முழுவது உம்  
கற்றனமென்று கனியற்க-சிற்துனியால்  
கல்லுந் தகரா கனவ்டியி  
கொலுலை கடத்தினால்.

3. State clearly what is said in " நீதிசெறிவினக்கம் " about 10  
" தாழ்மை," " தற்புகடிச்சி", " விடினமொழிபேசல்", " அடக்கமி  
ன்மை".

4. Translate into Tamil one of the following passages :— 15

(a) When the heroes travel to visit relatives or friends, they take their wives with them, at least at times. So the Pāṇḍavas, when they go to the dice-game, at Hastināpura. Krishna also, with Satyabhāmā, makes a visit to the banished Pāṇḍavas in the Kāmyaka forest. Subhadra also is allowed to accompany Arjuna. It is true that this is on a visit to her own home Dvārāvati.

(b) The women-folk then naturally greet one another most lovingly, although the seemingly so gentle ladies may often have the same feelings as Dhritarāshtra's daughter-in-law. When they saw Draupadi, they were not in a happy frame of mind. It is now clear, from what we have said, that the women of " higher circles " belonging to the warrior nobility enjoyed a great measure of freedom. 15

5. Write a letter in Tamil to your friend about either " your choice of a profession " or " the advantages of travelling." 20

6. Write the substance in Tamil of one of the following verses :—

(a) வாசி திரவே 20  
காச நல்கிடார்  
மாசில் மீழலையீர்  
எசலில்லையே.

(b) வாழ்க அந்தணர் வானவர் அனினம் 20  
விழ்க தண்புணல் வேந்தனும் ஒங்குத  
ஆழ்க தியதெலாம் அரன் காமமே  
குழ்க வையக மும் துயர் தீர்கவே.



## MALAYALAM VERNACULAR

*Paper-Setter and Examiner*—RAO BAHADUR L. K. ANANTHA-  
KRISHNA IYER, B.A., L.T.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. (a) മലയാള ഭാഷയിൽ കിളിപ്പാട്ടിന്റെ ആദ്യ 5  
കർത്താവ് ആരായിരുന്നു? കവിതയെ കിളിപ്പാട്ടെന്നു  
പെർകൊടുപ്പാൻ നാരണം എന്താകുന്നു?

(b) പള്ളത്തൊലം നാരായണ മേനോൻ അവർകൾ 5  
ഉടെ വാത്സികി നാരായണ പ്രബന്ധത്തിന്റെ ഭാഷാ  
ഭിതിയെ പററി അറിയാവുന്നത എഴുതുക.

(c) “ഇരുപത്തിനാലുവൃത്തം” ഇതിന്റെ ഗ്രന്ഥ 4  
കർത്താവ് ആർ ആകുന്നു അതിൽ പണ്ണിക്കുറുന്ന് കഥ  
യെ ചുരുക്കമായി എഴുതുക.

(d) തച്ചൊളി ഒരേനൻ ആരായിരുന്നു അദ്ദേഹം 4  
എന്തെപററി അറിയാവുന്നത എഴുതുക.

2. Give in plain Malayalam the meaning of the following verses :—

(a) നരകരിരഥ തുരഗപജ്ജനികഥം -

6

നടുവിൽ പൂക്കുകൊണ്ടു നിലനന്ദനൻ ;  
പെരുമാറുന്ന തുമ രിക്കലാന്തകൻ  
പലരോടും പൊരുതിടർ പെടുന്നതും  
പരിചൊടുകണ്ടു പുരന്ദരാത്മജൻ  
പരം പുരുഷനൊടിവണ്ണം ചൊല്ലിന്നാൻ.

(b) അനന്തൻ ഭുഃപത്തിൽ പങ്കുകൊണ്ടിട്ടന്നി

4

ലമമകൻ ക്രിഡാരസൈകതാനൻ  
ചിന്താപരിക്രേശമെന്തുള്ളു ബാലകൻ ?  
ഹന്ത, നൽ സ്വപ്നം താൻ ബാലകാലം !

(c) പറയുന്നല്ലോ മനക്കത്തോന്തേനൻ

5

തച്ചോളികേന്ദ്രമക്കുറപ്പിന്റെ ധ്വാട്ട.  
പയ്യം വെളിച്ചത്തോ ! ചങ്ങാതിയെ !  
ഞാനക്കളരിന്നു പോരുനേരം.

3. മേൽ പറച്ചിട്ടുള്ള പദങ്ങളുടെ സമാസങ്ങളെ വിവരിക്കുക.

8

4. താഴെ എഴുതിയ പദങ്ങളുടെ അർത്ഥങ്ങളെ എഴുതുക.

4

ചൊന്നോൻ, തകമുട്ടല്ലോ, വേദിയൻ, മുകിൽ  
വണ്ണൻ, ഭാവഭേദം, ക്ഷിപ്രം, ചേങ്ങററ, മനസ്സി  
നിയാൾ.

5. Translate into Malayalam one of the following passages :—

(a) A traveller once told me that a Chinese king showed him round a garden at Khanfou. This garden was twenty acres in extent. There I saw roses and many flowering plants. I have never seen anything more beautiful. At Andaman the Great is a golden temple which contains a tomb. It was an object of great admiration to the people.

15

(b) It was their reverence for this tomb which induced them to build a golden temple over it. Thither go the inhabitants in pilgrimage. They say that it is the tomb of Solomon the son of David. To this day, no one has ever touched at Solomon; no one at least has ever returned to tell the tale. A sailor has told me, how a ship was lost at sea. Ten men only escaped in the long boat. 16

6. Write in Malayalam a letter to your guardian on one of the following subjects :— 40

- (a) A rainy day in Calcutta.
- (b) Advantages of foreign travel.
- (c) Elephants.

## KANARESE VERNACULAR

*Paper-Setter and Examiner—MR. P. APPAJI RAO, B.Sc.*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay on any one of the following subjects :—

(a) A language is like a friend whose very faults and weaknesses endear him to us. 20

(b) The value of public opinion.

(c) Describe a village you have seen, under the headings :—scenery, society, sanitation, population, education, occupation and industries.

(d) Obedience to parents : it is but a poor return for the trouble they took for us while we were weak and helpless—it also secures our own interests, since what they say is always for our own good—it is also a religious duty enjoined by the *śāstras*.

2. Translate into Kanarese :—

It is not so long since all parents, when their children were born, adopted the point of view handed down to them by their own parents : that the boys would be educated and go out into the world, while the girls would marry. And be it noted that, while every conceivable preparation—the best schooling available, a university education if required, and all the rest of it—was made for the former, none whatsoever was made for the latter. 15

Nowadays it is true we have advanced a stage. We realize that some women must also go out into the world and be equipped for their going. But much the same attitude still persist with regard to those who marry. If a girl decides to take up any of the careers open to her,—nursing, teaching, stenography, massage, motor driving for example—her decision is accepted and her specialized training undertaken. But if she desires none of these things and prefers instead to become a wife and mother, is anything done to assist her to train for this career, as she must do for all others, if she is to attain a proficiency that will earn her living?

3. Describe briefly the methods used by Sāvitri to please Yama who thereupon gave her the boon of **ಸುಮಂಗಲಿ**. 15

4. Narrate the story **ಭ್ರಾತೃಪ್ರೇಮ**. 15

5. Which of the Kāvyaas in *Kāvyaasāgraha* is best appreciated by you? State your reasons. 10

6. ನೀನು ಗುರುವಹೆ ಯೆನಗೆ ಸಾಕ್ಷಾ |

ನ್ಮಾನನಿದಿ ಪಾಂಡುನಿಗೇ ಸರಿಯೈ |

ನಾನು ಕುಳಿತುಟಿ ನಿಮ್ಮ ಭಿಕ್ಷದಲನ್ನ ವುಂಬುದಕೆ ||

ತಾನನಿದು ಗುರುವಿಷಯ ವುಂಬೆನೆ |

ಯೇನೆನಲು ಯಮತನಯ ನೆಂದನು |

ನಾನು ತಂದನ್ನವನು ಜನನಿಯು ಹಂಚಿ ಭೋಜನವ ||

Write the above in prose order and add short notes wherever necessary. 15

7. Explain the meaning of :— 10

**ನುಂಗಿದ ತುತ್ತಿನ ರುಚಿ ಮತ್ತೆ ಬಯಸಿದ ಹಾಗೆ.**

—

## BURMESE VERNACULAR

*Paper-Setters*—{ MAUNG WE LIN.  
MAUNG BA, B.A.

*Examiner*—PROF. PE MAUNG TIN, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. (က) ကင်းဝန်မင်းကြီးသည်ပြင်သစ်နိုင်ငံသို့သွားရောက်ခြင်း 10  
ကြောင့်ဒေသန္တရဗဟုသုတတိုးပွားကြောင်းရေးသားဖော်ပြပါ။

(ခ) ဩဝါဒထူးဖျိုးတွင်ဇနီးသားပါရှိသည်အတိုင်း၊ အဆိပ် 10  
အနေအရပ်အသွားများ၍ဘေးကွေ့ရကြောင်းကိုထုံးသက်သေ  
နှင့်တကွဖော်ပြပါ။

(ဂ) ဒေဝကုန္တန်မင်းသားသည်ထူဝင်စပ်မှဘီလူးဖြစ်ရခြင်း 10  
အကြောင်းကိုရေးသားဖော်ပြပါ။

(ဃ) ရွှေပြည်မိုးဝတ္ထုကိုဘတ်ခြင်းအားဖြင့်ဖြန်မာသူမျိုးတို့၏ 10  
ရင်ကျေးသောအပြုအမူအပြောအဆိုခလေ့ထုံးစံကိုသိနိုင်ကြောင်း  
ရေးသားဖော်ပြပါ။

2. အောက်ပါစာပိုဒ်များကို၊ ထုတ်ဖော်အဓိပ္ပာယ်ထုတ် 10  
ဖော်၍၊ ၎င်းစာပိုဒ်တို့ကိုသင့်လျော်သောဝကျများတွင်ထည့်သွင်း  
ရေးပြပါ။

ချောစားသည်။ ထံသယ။ ဖြိုးဖြိုးပျက်။ ဝရိယာထံ။ စော  
ကြောသည်။

3. အောက်ပါလင်္ကာစာပိုဒ်၏ အနက်အဓိပ္ပာယ်ကိုရေးထား  
မော်ပြပါ။ 15

ပဌမရွယ်၊ ငယ်သော်ကတည်း၊ သိပ္ပခေါင်အား၊ တတ်မြောက်  
များမှု၊ ထောသားရန်အောင်၊ ခြင်္သေ့ယောင်မျိုး၊ မရှောင်မညာ၊  
တင်းတင်းမာ၍၊ ပညာရဲရင့်၊ ဝွဲလယ်တင့်တိမ်၊ ဆိုသင့်ဆိုထိုက်၊  
ဆိုလိုက်ဆိုမျှော၊ ဆိုပြောထောထည်း၊ သဘောသိသိ၊ ဆိုပိုးမိလျက်၊  
တိတိမြေဖြင့်၊ သိန္ဓော့နှင့်မျိုး၊ ရလျှင်ပုံလုံး၊ နှလုံးနှင့်နှုတ်၊ တံဆုတ်  
ငင်နည်း၊ တကြို့တည်းလျှင်၊ ထိပ်ထည်းစုံလျှင်၊ ရွှေတင်းနောက်  
ရှေ့၊ စေ့မြေထမ္မန်၊ ယုတ်မှန်ကျိုးကြောင်း၊ ကောင်းသားမိလျှင်၊  
စဉ်သားသဒ္ဓါ၊ သာသည့်စတား၊ နာထွယ်များ၏၊ ရည်သွားယုတ်  
မိမ့်၊ အားတိုင်းနှိမ့်လည်း၊ မမိမ့်ကိုယ်ပင်၊ ကျေးဇူးအင်ကြောင့်၊  
ညွှန်တွင်စွန့်ပစ်၊ မဏိစစ်မျိုး၊ မညစ်မညှေး၊ ညာဏ်ရောင်မြိုးအုံ၊ အသုး  
ပြင်လျှာ၊ မထွပါလည်း၊ ရသာချိုမြ၊ ပနသသို့၊ တကွရောပြွမ်း၊ အချစ်  
စမ်းက၊ ချိုးမွမ်း၊ မြောက်စားသူသနား၏၊ ရုပ်အားလျှောက်ပတ်၊  
ဂုဏ်ညီညွတ်မှု၊ သင်းဖြတ်နံ့ကျော်၊ ပန်းနှင့်လျော်ဟု၊ ပေါင်းမော်  
ကြွေ၊ ကျွမ်းဝင်ကြထို၊ ကြည်ညိုကြလင့်၊ ဘုန်းတန်းပွင့်လျက်၊ ချီဖြင့်  
လက်ဝါး၊ ဦးထိပ်ထား၏။ "

4. Translate into Burmese :—

15

In thick darkness the great steamer was creeping through dangerous but smooth waters towards the end of her journey. The passengers and most of the crew were asleep in their berths. The captain was taking his well-earned rest in his cabin. On the bridge was the pilot, who had left his wife and the son whom he loved much better than his own life, to bring this great ship safely into harbour. It was one of those dark nights at sea when it is impossible to catch a glimpse of the vast ocean through which ships make their way. Not a star shone in the sky. The only sounds in the darkness were the grinding of the paddles, and the deep low murmur of the smooth sea. But of a sudden, a terrible cry arose above the sea—a cry of "Fire." Gone was the darkness. Every face was visible. The great ship, now a driving shape of flame, cut through the smooth and dangerous water, at its highest speed, a race against fire.

၆. အောက်ပါအကြောင်းအရာကိုစာစီကုံးရေးသားပါ

20

အကျင့်စာရိတ္တအကြောင်း

အကျင့်စာရိတ္တကောင်းခြင်း၏အကျိုး-မကောင်းခြင်း၏အပြစ်-  
ကောင်းအောင်မည်သို့ပြုထုပ်သင့်သည်-ယေစဉ်ကဆိပ်မှာမိတကဆု  
မ္မခြင်း-ကောင်းသောအကျင့်အထွေကိုရစေခြင်း-ကျောင်းတွင်ဆရာ  
ကသွန်သင်ဆုပြုသခြင်း-ဆရာ၏ဩဝါဒကိုလိုက်နာခြင်း-မကောင်း  
သောသူများနှင့်မပေါင်းဖော်ခြင်း-မကောင်းသောအာရုံစွဲမထိုက်စား  
ခြင်း-ဆိုးသွမ်းသောအပြုအကျင့်အမှုအရာကိုရှောင်ကျဉ်ခြင်း-  
ကောင်းသောအကြွေးအမြင်ရစေရန်အလေ့အထပြုခြင်း-အထူးအပ  
ကိုလိုက်၍ပြုခြင်း-မိမိမိတ်ကိုဆုမ္မခြင်း-အစဉ်မပြတ်မိမိကိုယ်ကိုထိမ်း  
ထိမ်းစောင့်ရှောက်ခြင်း-မသူတော်နှင့်ပေါင်း၍ပျက်စီးကြောင်း  
မှီသက်သေး

### KHASI VERNACULAR

*Paper-Setter*—MR. ROY ROWLAND THOMAS, M.A.

*Examiner*—MR. WILSON READE

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passage into Khasi :—

15

It is said that Lalitaditya of Kashmir asked the king of Bengal to come to Kashmir, and promised him safe conduct, swearing in the name of a famous image of Vishnu. But when the latter reached Kashmir, Lalitaditya had him killed by assassins. As soon as the news of this foul crime reached Bengal, there was a cry for revenge. But Bengal was weak and helpless. All the same, a number of attendants of the late king of Bengal swore vengeance and proceeded to Kashmir in the disguise of pilgrims.

2. Give the imitatives of five of the following in Khasi with illustrations :—*Khawduh, Duaid, Dorkhat, Diengiei, Kyndiap, Khyllah, Lalot, Lamher.*

10

3. Explain in Khasi with reference to the context :—

15

*Either, Dei hangne la hap ka jingkit ba ban sat.* (

*Or, . . . te kum u bnai*

*Pa kylla ham khyndew, arsut ruh u leit.*

4. Explain two of the following, giving illustrations :—*U sim tyngwieng, U dieng byllan, Ka ta but khlem saikun.* 10
5. Explain the following in Khasi, giving illustrations :— 10
  - (a) Kam bit ban set artylli ki masi kyr tong ha kawei ka sem.
  - (b) Ka dieng kam ju khieh thala khlem da beh ka lyer.
6. Explain in Khasi with reference to the context :— 10
 

*Either, Ngin liat hi ha ka liewlep ba ngi riam ia kiwei.*  
*Or, Ksan rympei rem dorbar.*
7. Write in Khasi from your text about *U Sing Iapnat.* 10
8. Write an essay in Khasi on one of the following subjects :— 20
  - (a) Sweet arc the uses of adversity.
  - (b) Town life *versus* country life.
  - (c) Any journey you have made.

## MARATHI VERNACULAR

*Paper-setters*—{PROF. D. R. BHANDARKAR, M.A., PH.D.  
MAHAMAHOPADHYAY PANDIT SITARAM SASTRI.

*Examiner*—MAHAMAHOPADHYAY PANDIT SITARAM SASTRI

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay in Marāṭhī on any one of the following :— 20
  - (a) तुम्ही श्रीमंत झाला तर कसे वागला व आपल्या संपत्तीचा कसा उपयोग कराल ?
  - (b) खेडे गांवांतील जीवन व त्यांतील गुणदोष ।

2. Translate into Marāṭhī the following :— 15

There is no wonder that people in England paid no attention to learning at a period when the theory of 'might is right' was abroad, and physical strength and military skill were the only accomplishments that were highly prized. At that period the only things that the nobility cared to learn were war and the chase. They did not know reading and writing. If they learnt to read at all, they could with great difficulty spell out the smaller words only, skipping the long ones altogether! The clergy were the only learned class, but their learning, too, was generally of a very limited kind. Their favourite study was theology, although in the monasteries a dim light of other sciences also was slowly beginning to break. It was the clergy who practised all the peaceful and dignified professions; they were the lawyers, doctors, and teachers of that period. Every monastery had a separate room for writing where these clergymen were set to copy out manuscripts which were bordered on all their four sides with illuminated designs in brilliant golden colours. Such copies of manuscripts were sold at very high prices, a Bible sometimes costing as much as forty pounds.



3. Write what you think about महादेव गोविन्द रानडे as a man, 10  
giving reasons.

4. Give the substance of गड आला पण सिंह गेला, and sketch the 10  
character of उदयभानु ।

5. Explain in Marāṭhī the following :— 20

न रंजे कारंजे निरखुनि फणीते फणफणी ।  
मुदेनें मोदेना नलगुण गणीजे गुणगुणी ॥  
न बैसेजे सेजेवरि न परिसेजे शुक्रगिरा ।  
न नाहे माना हे न धरि छलना हेतु दुसरा ॥१॥  
धाता करींच करितां मृडु हे न होती ।  
या कारणास्तव मनोमय मूस ओती ॥  
तेथें भरोनि पहिला रस पूर्ण केळी ।  
ओतीव हे घटिता कृति बोलिजेली ॥२॥  
आधार हाच सजणे बहुजीवनाचा ।  
रक्षी दये कहनि मान ऋषी जनाचा ॥  
यादांस फार ह्मणती जन सौख्यकारी ।  
हा पाहिजे तरि वरी नलरूपधारी ॥३॥

6. Parse the following :— 10

त्याच्यानें तेथें जाववत् नाहीं ।

7. Give the sense of the following :— 15

कलियुगींहे सोंगल राक्षस । केला गाई ब्राह्मणांचा सत्यानास ॥  
गोरगरीबांचा छळ करती । पतिवर्तांच्या इजती घेती ॥ अहो घरची  
बाईल ओढून नेती । आह्यां टकटकां बघाया लाविते । चरचरा गाई  
भरून कापोती । अन् घटघटा आडूच रगात पोती । ह्मेकात्या अंबाबाईला  
खपत । ह्मेकात्या गिर्जावराला खपत ॥ मग ह्मण अंबाबाई अपुल्या वरा ।  
जाहो पृथिवीवर घ्या अवतारा ॥ सोडवा धरित्री बेगी जाउन । काय  
करीतां इथं बसून ॥ झाला धर्माचा हो चुरा । झाला साधूचा हो चुरा ।  
देती पतीवर्ता प्राण । कांहो झांकितां हेह नयन ॥ येऊं या तुझाला हो  
करण । नका झाकूं अपुले नयन ॥ उदे उदे ॥

NEPALI VERNACULAR

*Paper-Setter*—RAI SAHIB HARIPRASAD PRADHAN

*Examiner*—MR. SURYA VIKRAM GEWALI, B.A., B.T.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Nepali any two of the following passages :—

30

(a) Once, whilst sailing in his yacht on the Mediterranean Sea, King Edward decided to land at a little Italian seaport. As it was a wet day and the roads were very dirty, a carpet was brought on which the royal visitor might walk from the landing-place to the carriage which was in readiness for him. At the last moment it was found that the carpet was too short to reach to the carriage; so, to complete the pathway, the officials of the town spread on the ground the Italian flag, the only piece of cloth which, in their hurry, they could find. The king landed, and on reaching the end of the carpet, at once noticed the flag. He did not hesitate a moment; but stepped aside on the road-way, at the same time raising his hat out of respect for the flag of the country he was entering. This simple yet royal act of courtesy completely won the hearts of the Italian people, and the story is told in many parts of Italy to this day.

(b) When he was twelve years old his dear mother died. He was now a friendless orphan. His step-father, who had become very poor, refused to help him, and at this early age he was turned out into the world to shift for himself. He earned a little money by teaching children, some of whom were older than himself. A kind-hearted missionary, who knew how poor he was and how hard he worked, took him into the English mission school at Surat as a free scholar. So this little boy of twelve taught his own pupils from seven o'clock to nine in the morning, and six o'clock to eight in the evening, and went himself to the English school from ten o'clock till four in the daytime. His own meals he cooked whenever he could find time. And he worked hard at his English books far into the night. Never was there a student who worked harder than Bahrāmji.

(c) Alexander was very fond of his mother Olympias. She was a stern woman with a bad temper, and was always trying to take part in the government of the state, for which she was not fitted. Her son often sent her splendid presents when he was far away in Persia. At the same time, he begged her, in his letters, not to meddle in state affairs, and to give no trouble to Antipater, the governor of Macedonia, who had been left in charge of his kingdom, while he was making war in distant lands. Once Antipater was obliged to write to Alexander, complaining bitterly of Olympias. The king remarked to his friends, 'Antipater does not know that one single tear of my mother is able to blot out six hundred of his letters.'

2. Either, Explain and expand in Nepali the ideas contained in the following passage, with reference to the context :— 15

“ बुद्धले को अखडा रहेछ, बुद्धियो, निःसार संसार यो ;  
राखी धैर्य तसर्थ बिज्ञान छे थामी विपत्ता मन,  
आनन्दी रहनू, प्रसन्न न हुनू ॥”

Or, Depict in Nepali the character of Sitā as the ideal of Indian womanhood.

3. Fill up the gaps in the following passages :—

10

राम राजा—भन्ने कुरा सारा राज्य—फैलियो. यो शुभ सन्देश—  
 दुनिया हरू बढो खुशी—अयोध्या भर नाच, गान, आदि—गर्न लागे.  
 तिनी हरू आफना आफना घर र बजार हरू—सडक हरू मा पानी—थाले,  
 ठाऊं ठाऊं—ध्वजा—दरबार का—मानीस पनि सारा—भई आफना  
 आफना श्रृङ्गार—लागे. महारानी हरू पनि सब—भये ।

4. Write a letter in Nepali to your father, giving him an account of your experiences in the school. 15

5. Write an essay in Nepali on any one of the following subjects :— 30

- (a) The usefulness of the cow as a domestic animal.
- (b) The evils of smoking tobacco and cigarettes.
- (c) The value of education in character building.
- (d) Nepali as the medium of instruction

## PORTUGUESE VERNACULAR

*Paper-Setter and Examiner*—DR. P. D. BRAGANCA CUNHA.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following into English :—

20

Dom Joao I, rei de Portugal, cognominado o de Boa Memoria, mas mais conhecido pelo seu titulo de Mestre d'Aviz, foi filho de el-rei D. Pedro I e de D. Thereza Lourenço. Nasceu em Lisboa a 15 de abril de 1368, e na idade de 11 annos foi eleito mestre da ordem de Aviz e armado cavalleiro por seu pae. A prudencia e valor deste monarcha deveu Portugal a conservacão da sua independencia, que estava a ponto de perder com a morte de D. Fernando I. O Mestre de Aviz, a quem a rainha D. Leonor, regente do reino, confiara o governo do Alentejo, para o afastar de Lisboa, aonde era benquistado do povo, foi ao paço a pretexto de conferenciar com ella.

2. Give in your own words the meaning of the following verses :—

30

Tremia a rainha de me ouvir cantar. . . .  
 Oh, loucura minha, desventura minha;  
 Cantigas sao asas, fazem-nos voar. . . .  
 Mandou-me prender, mandou-me espantar.  
 E eu desatei a rir, eu desatei a rir,  
 E tres dias cantei com mais tres noites a seguir;  
 Nao dorinha a rainha de me ouvir cantar. . . .  
 Oh, loucura minha, desventura minha;  
 Cantigas sao graças para nao chorar. . . .  
 Mandou-me prender, mandou-me enforcar.

3. Write a short essay in Portuguese about—

35

'O amigo certo conhece-se na occasiao incerta.'

4. Translate into Portuguese the following sentences :—

15

- (a) We saw her herself.
- (b) We saw her ourselves.
- (c) It was you who saved me.
- (d) It was I who affirmed that.

- (e) It was not we who said that.  
 (f) To be out of one's mind.  
 (g) To be conscious of oneself.

TELUGU VERNACULAR

*Paper-Setters*—{PROF. S. RADHAKRISHNAN, M.A., D.LITT.  
 DR. R. C. RAU, M.A., PH.D.

*Examiner*—DR. R. C. RAU, M.A., PH.D.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passage into idiomatic Telugu :—

20

Man is an imitative being. He learns to imitate from his very infancy. It is absolutely through imitation that he learns even to walk and speak. As he grows up he goes on imitating the people he mixes with. Some he imitates in their mode of living, some in their fashions and fancies. Even the ideas held by him are often the outcome of imitating some one or other. The different religions are all human institutions and in the formation of these institutions too we must expect to find expression of this peculiar characteristic of human beings. And, in fact, when we closely study the religions of the world we are surprised to find many common underlying principles, modes of worshipping, forms of rituals, &c. in quite different religions as they are called.

2. విశ్వావిత్త్రుడు, మాతంగి కన్యలు, సక్షత్రకుడు—వీనిని 20  
 గురించి వ్రాయుడు.

3. చ్యవసుని వృత్తాంతము వ్రాయుచు మీ రెట్టి నీతులు 20  
 గ్రహించ గలరో వ్రాయుడు.

4. ఈ క్రింది లోకోక్తుల కథము వ్రాసి మీ స్వంత మాటలందు 15  
 పొందు పరచుడు.

- (a) "లందిన సిగ మరియు దీకున్న గాల్లు."  
 (b) "పడుగురితో త్రాగుగంజి పాయసము."  
 (c) "కులము చెడిన గాని కూడులేదు."  
 (d) "దున్నపోతీనినది యన్న దూడ గట్టి వేయుము."  
 (e) "తోక గోసి సున్నము పెట్టుట."

5. "చికమత్స్యము" గురించి నొక వ్యాసము వ్రాయుడు.

25

## URDU VERNACULAR

*Paper-Setters*—{MAULVI SYED MD. TAHIR RIZWI, M.A.  
KHALIFA MD. ASADULLAH, B.A.

*Examiner*—KHAN BAHADUR MAULVI REZA ALI WAHSHAT

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Explain the following passage, with reference to the context, in your own Urdu :— 10

مرنا برحق - اچھا پھر مرے پیچھے کیا ہوگا - رہی عقیل ہے  
رہی فہیم ہے رہی زیرک رہی دانشمند - جو اس سوال کا جواب  
معقول دے - جو اس معصے کو حل کرے جو یہ پھیلی ہوئے -  
انسان کی خاص طرح کی خلقت یعنی اسکا وجود عاقل ہونا اس  
بات کا مقتضی ہے کہ ضرور اس سے کوئی بڑی خدمت متعلق  
اور اسکے ذمہ زیادہ جوابدہی ہے - اگر اسکا صرف یہی کام ہوتا کہ  
پیت بھرے اور سو رہے اور گرمی سردی سے اپنے تئیں بچانے تو  
اسکے لئے زیادہ عقل کی ضرورت تھی - جانور اپنے بڑے بڑے جٹوں  
کی پرداخت پر بخوبی قادر ہیں - حال آنگہ عقل سے بے بہرہ  
اور دانش سے بے نصیب ہیں \*

2. Give a short description of the جشن نوروزی which you find in text-book, in your own Urdu. 10

3. Comment briefly, in your own Urdu, on the central idea contained in the poem پہرل کی فریاد 10

4. Explain the following in Urdu, with reference to the context :— 0

کسی نے یہ اک مرد دانا سے پوچھا  
کہ نعمت ہے دنیا میں سب سے بڑی کیا  
کہا عقل جس سے ملے دیں و دنیا  
کہا اگر نہ ہو اس سے انسان کو بہرہ  
کہا پھر اہم سب سے علم و ہنر ہے  
کہ جو باعث افتخار بشر ہے

کہا گر نہ ہو یہ بھی اس کو میسر  
 کہا مال و دولت ہے پھر سب سے بڑھکر  
 کہا در ہو یہ بھی اگر بند اسپر  
 کہا اسپہ بجلی کا گرنا ہے بہتر  
 وہ نذک بشر تاکہ ذلت سے چھوٹے  
 خلاق سب اسکی نعروست سے چھوٹے

5. (a) Use the following expressions in sentences :—

5

دم بھرنا - دم دینا - دم مارنا - دم اکھڑنا - قدم اکھڑنا

(b) Give the opposite numbers of the following :—

5

عزائم - اشخاص - موت - ملت - مذہب - تصویر - عمارت

خط - اخلاق فنون

6. Expand the idea contained in the following verse :—

10

کرتے ہیں تھی مغز ثنا آپ اپنی  
 جو ظرف کہ خالی ہے صدا دیتا ہے

7. Write an essay in Urdu, on one of the following subjects :—

20

(a) Truthfulness : its meaning—advantages—illustrations.

(b) Female Education : its advantages and disadvantages—suitable type—present-day tendency.

(c) Shah Jahan : brief sketch of his life and reign—his artistic taste.

8. Translate the following into Urdu :—

The question of cost is of course very important. It is generally believed, by those who have experience and knowledge, that children brought up under this healthy system would make as good progress with their class-work as in the ordinary school, even if their class hours were very much shorter. If, however, this were not quite the case, the system would still be advantageous economically, as well as educationally, because the children would certainly be able to bring to their homes contributions, in kind, of considerable value.

## MANIPURI VERNACULAR

*Paper-Setter*—MR. SANJIBAN NADIA SINGH

*Examiner*—MR. RAJKUMAR SETHU SINGH, B.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either, (a) Give a brief account of the events that took place on the eve of the war between Arjun and Babrubahan.* 10

*Or, (b) Enumerate some of the great deeds of Alfred the Great, King of England.* 10

2. Give a critical estimate of the character of Moirang Thoibi and explain why she is called the embodiment of divine love. 10

3. *Either, (a) Explain the truth of the statement that Horatio Nelson was born to protect the honour of England.*

*Or, (b) Give the gist of the conversation between Madhu and Maloti.* 10

4. Explain any two of the following extracts with reference to the 5+5 context :—

(a) “মহারাজ যক্ষী অমতগী দমক থরাই ধাবদি মত্তিক ওইদে ; মহারাজনা হিংহুনা লৈরবদি প্রজাশিং নত্রগা অসিগুৰা যক্ষী কয়গীসু কান্নবা রাই ।”

(b) অহুনা অতনবা হাঙ্গিবা অসি ধম্মোই লৈরাংদা ভোংবা ভীনগী মশকনি ।

(c) জীবগী অরাবা কোকপিনবগী দমক মশাগী মুড়াইবা পূমনমক ধাদোক্ত না বুদ্ধদেবনা পৃথিবীনা অমরগী খুবম ফংবা উমলে ।

5. Amplify the following :—

15.

মৌ অপংবা লাল ওইনৈ ।

উ অকংবা শিং ওইনৈ ॥

6. Translate the following extract into Manipuri :—

15.

Once upon a time there were two cats who lived in the same town and were great friends. One afternoon they went out for a walk together and came to a house with an open window. Cats never pass an open window without peeping in. The two cats stopped, and, looking into the room, they both saw, at the same time, a cake on a table.

7. Fill up the ellipses in the following extract :—

5.

প্রকৃতিগী—মক্ষমদা কৈধেনমানবী হাইবা মক্ষম অসি চিংখক্তা—খেল  
অবনি । মরাকতা মাইল অমরোম ময়ুংদা মাইল ৩ লোম—লমনি ।  
অরাপ্পদগী—চিং মতোন অপাকপা অমা—উই ।

8. Construct *five* short sentences with any *five* of the following words :— 5

- (i) ধৌবোন, (ii) লবান, (iii) লুখা, (iv) শোভো, (v) ভিনগোই,  
(vi) পাখংফাল.

9. Write an essay on any *one* of the following subjects :— 20

- (a) Female education  
(b) National games.  
(c) The rules for keeping good health.

## GARO VERNACULAR

*Paper-Setter and Examiner*—MISS CHARLOTTE A. WRIGHT, B.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Answer in Garo *four* only of the following questions :— 40

- (a) Describe Moses' meeting Jehovah on Mount Sinai.  
(b) What was the year of Jubilee, and how was it to be observed according to the laws of the Hebrews?  
(c) Mention any *one* of the laws of the ancient Hebrews as given in the books of Moses, and explain clearly how that law was changed or added to in the Sermon on the Mount. (Matthew 5—7.)  
(d) Contrast the choices of Abraham and Lot in Canaan, explaining the effect which the choice of each had upon his life.  
(e) Tell the story of the *Atching*.

2. Give a summary of a sentence or two in Garo of the following :— 15

Amgkeni gimin gesa golpo gnang, na antangni dedrangko mikkangchi regija gitchingchi reani gimin saisha. Angke bisarang aganchakaha 'Ama, naa antangan gitchingchi rea'; bisarang magi-parangni aganako dakana late uamangni daka gitasa dakpagen.

Magipa kaonangrakgipa ongode dedrangba kaonangrakgipa onngen. Magipa namgija katarangko jakkalode dedrangba indaken onngen. Magipa tole agangipa ongode, dedrangba indaken onngen. Indiba magipa sontolgipa, kusik kasingipa aro sronggipa ongode dedrangba ugitan dalroropagen.

3. Translate into Garo the following passages :— 15

(a) The rainy season sometimes held longer or shorter, as the winds happened to blow. After I had found by experience the ill consequences of being abroad in the rain, I took care to furnish myself with provisions beforehand, that I might not be obliged to go out, and I sat within doors as much as possible during the wet months.

(b) One day as Abraham Lincoln was riding along a country road on horseback, in company with some friends, he saw a pig stuck fast in a deep place filled with mud, struggling to keep from going in deeper. The poor pig was squealing in terror, and the comical sight filled the friends with laughter and delight. After Lincoln had ridden on a little distance, he turned back his horse, saying, 'Gentlemen,



excuse me a few moments,' and rode back as fast as he could to the place where the poor creature was, got down from his horse, and drew the pig out of the mud. When he rejoined his companions they asked, 'Why did you go back?' He told them what he had done, adding, 'I couldn't sleep well to-night, if I hadn't done that thing.'

4. (a) Explain the composition and state clearly in Garo the meaning of five of the following words or phrases :—*toradok*, *biret biret*, *balkoponi*, *jagengwangari*, *hingkok rae*, *wakelong*. 10

(b) Explain the difference between *salgimik* and *salmadrang*, *bakan* and *ruutgijan*.

5. Write an essay of from 200 to 300 words on one of the following subjects :— 20

(a) Let your school room clock tell the story of what it sees and hears for one day.

(b) Contrast rice cultivation in the hills of Assam with that in the plains.

(c) Describe the observance of some one national holiday, such as Empire Day, the King's Birthday, or Armistice Day in your high school and community.

### LUSHAI VERNACULAR

*Paper-Setter and Examiner*—REV. E. L. MENDUS, B.A.

*Candidates are required to give their answers in their own words as far as practicable*

SEVEN questions ONLY to be answered

1. Give your reasons for the popularity of Aesop's *Fables* and of Bunyan's *Pilgrim's Progress*.

2. State any historical facts you know about Aesop and John Bunyan.

3. Give a full and vivid description of Christian's fight with Apollyon.

4. Say what you know of *Rintlêma*.

5. Write out one of Aesop's *Fables* to illustrate the truth : 'Union is strength' (*Inzwumna chu chakna a ni*).

6. What did Aesop say about the miser (*mi yir thu*)?

7. Write out the various uses of the Lushai word *in*.

8. Give examples of the use of the subjunctive mood in the Lushai language.

### ALTERNATIVE PAPER IN ENGLISH

*Paper-Setters*—{ REV. A. CAMERON, M.A., B.D.  
MR. A. K. CHANDA.

*Examiner*—MR. H. C. CLARIDGE, B.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Rewrite one of the following passages in your own words :— 14

(a) The Yare seems a leisurely current till you begin to breast it in a heavy old boat under a high sun. It starts into activity

then, I can assure you; the oar that you have gaily plied in the descent becomes hostile and hateful, the boat a leaden tub; now is the time for your elders to exert themselves, while you recline with dignity in the stern and handle the rudder strings. I like to be free to watch the shifting landscape, I like the responsibility of steering our course.

(b) It is rather in the twilight than in the heat of the day, or perhaps just before twilight, when the sun falls horizontally across the earth, that the deepest buried springs of memory within us are stirred. What is there about those lengthening shadows, when they fall across lawns or meadows from motionless tree-branches, that stirs the mind and makes a person feel strangely kind to his worst-hated enemy? What is there about a long white road, disappearing in the twilight, over a ridge of hills to some remote, unseen destination, that touches the imagination in a way so hard to put into words?

2. Bring out clearly the meaning of *one* of the following verses :— 14

(a) My wealth is health and perfect ease :

My conscience clear my chief defence;

I neither seek by bribes to please,

Nor by deceit to breed offence :

Thus do I live : thus will I die;

Would all did so well as I!

(b) Now rings the woodland loud and long,

The distance takes a lovelier hue,

And drowned in yonder living blue

The lark becomes a sightless song.

3. Explain and illustrate any *two* of the following terms :— 5  
Alexandrine, anapaest, dactyl, iambic, trochee, hexameter, couplet, blank verse, pentameter.

4. Explain and give examples of any *four* of the following :— 16  
allegory, strophe, anticlimax, alliteration, antithesis, irony, satire, metaphor, simile, synecdoche, oxymoron, apostrophe.

5. *Either*, Write a short description of a circus or a fair that 20  
you may have seen.

*Or*, Write a letter to a friend asking him to read a book which you have found very interesting.

6. Narrate briefly (in not more than *two* pages) *EITHER* the story 15  
called *The Gold Bug*, or the one called *Ancient Lights*.

7. *Either*, Explain, with reference to the context :— 16

And as afield the reapers cut a swathe

Down through the middle of a rich man's corn,

And on each side are squares of standing corn,

And in the midst a stubble short and bare;

So, on each side were squares of men, with spears

Bristling, and in the midst the open sand.

*Or*, Give a summary of *Reverie of Poor Susan* by Wordsworth, and explain the main idea of the poem.

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(To look over answer-papers written in Vernaculars)

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	SRIJUT SURYYAKUMAR BHUIYAN, M.A.
	ARMENIAN
	MR. ZEBEDEE HANANIAN.
	NEPALI
	MR. HARIPRASAD PRADHAN, M.A.
	TELUGU
	DR. B. RAMCHANDRA RAU, M.A., PH.D.
	BURMESE
	MR.-G. J. MUNRO.
	URIYA
	REV. B. DAS, B.A.
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	MR. MUHAMMAD SHAFI, M.A.
	MAULVI SYED MAHAMED BADRUL ALAM, B.A.
	MARATHI
	PROF. S. N. SEN, M.A., PH.D., B.LIT.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer six questions only, at least ONE being from each group*

*Each question carries 16 marks; FOUR marks are reserved  
for excellence of style*

### GROUP A

1. Sketch the career of Chandragupta Maurya and state what you know of his system of civil administration.
2. Give a brief account of the reign of Harshavardhana, illustrating the character of his rule from contemporary evidence.
3. Write brief notes on the following dynasties :—Saisunagas, Sungas, Andhras, Pallavas.

### GROUP B

4. Trace the history of the kingdom of Vijayanagar with special reference to its relations with the neighbouring Muslim States.
5. Mention the steps that led to the conquest of Northern India by Akbar, and characterize his policy towards his Hindu subjects.
6. Give a short account of the life of Shivaji and mention what you consider his principal achievements.

### GROUP C

7. Trace briefly the history of the struggle between the English and the French for ascendancy in Southern India between 1744 and 1754.
8. Describe Wellesley's system of subsidiary alliance, and show how he made the British the supreme power in India.
9. State the leading events of the administration of Lord Curzon.

## GROUP D

10. Indicate the present constitution and functions of the Indian Legislature at Delhi.

11. Describe the principal heads of taxation in British India at present, and write what you know of the prevailing methods of collecting the land-revenue.

12. Summarize the measures that have been taken by the British Indian Government for the construction of public works and the preservation of forests.

## GEOGRAPHY

*Paper-Setters*—{ Mr. BIRAJMOHAN MAJUMDAR, M.A., B.L.  
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 NASIR ALI KHAN, M.A.  
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 MR. LALTA PRASAD SUKUL, M.A.  
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 MR. MAHESWAR DAS, M.A.  
 ASSAMESE  
 MR. A. N. BORAH, M.A.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Clearly distinguish between— 10
  - (a) the Tropic of Cancer and the Tropic of Capricorn;
  - (b) neap-tide and spring-tide;
  - (c) soil and alluvium;
  - (d) a dormant volcano and an extinct volcano.
2. Explain the following terms in connexion with a river :—delta, 10  
 estuary, source, and tributary.  
 Give an account of the erosive action of a river, illustrating your answer with reference to the Ganges as far as possible.

3. *Either*, What does a barometer indicate?  
 Explain the main principles underlying the circulation of air. 10  
 Distinguish between constant winds, periodical winds, and local winds. Give an example of each.  
 Or, Explain the formation of coral reefs, with examples.
4. Draw a map of India and indicate on it the following :—Bhuj, Comorin, the Mahanadi, the Patkoi range, Ranchi and Sambhar. 10
5. (a) Describe the region of India characterized by the presence of glaciers. 10  
 (b) Enumerate :—  
 (i) The chief mineral products of Bihar and Orissa.  
 (ii) The chief agricultural products of Bengal.  
 (iii) The peculiarities of the animal life in Gujarat.
6. *Either*, Give an account of the geography of the Bombay Presidency under the following heads :—(a) boundaries, (b) chief rivers, (c) main industries, (d) chief towns, and (e) principal languages. 10  
 Or, Describe the irrigation system as it prevails in the Panjab and in the Madras Presidency.
7. Write short notes on the following :—Agra, the Brahmaputra, Cherra-Punji, the Parasnath hill, Pachmari, Quetta, Rewa, Seringapatam, Sylhet, and Takht-i-Sulaiman.
8. State the directions in which the principal mountain ranges of Asia run, and show how the main water-channels of Asia have been regulated by them. 10
9. *Either*, Draw a sketch-map of Africa and locate on it the following :—the Atlas Mountains, Cape Town, Kilimanjaro, and the Nile. 10
- Or, Enumerate the different provinces into which Australia has been divided, and mention the capital town of each.
10. Write short notes on the following :—Athens, the Danube, Geneva, the Greater Antilles, Lima, Mont Blanc, Oxford, Philadelphia, the Volga, and Warsaw. 10

## ELEMENTARY MECHANICS

*Paper-Setters*—{ MR. MUKTIDARANJAN RAY, M.A.  
 ,, SATISCHANDRA GHOSH, M.A.

*Examiners*—{ MR. KSHETRAMOHAN GHOSH, B.Sc.  
 ,, GOPALCHANDRA BHATTACHARYA, M.A.  
 ,, SANTANUKUMAR MUKHERJEE, M.Sc.

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any SEVEN questions*

*The questions are of equal value*

*Neatness will be taken into consideration in awarding marks*

1. Enunciate the parallelogram of forces, and show how it is experimentally verified.

2. Define 'moment of a force about a point.' How is it geometrically represented?

Prove that the moments of two intersecting forces about a point on their resultant are equal in magnitude but opposite in sign.

3. The sides  $AB$  and  $AC$  of a triangle  $ABC$  are bisected in  $D$  and  $E$ . Show that the resultant of forces represented by  $BE$  and  $DC$  is represented in magnitude and direction by  $\frac{3}{2} BC$ .

4. Define 'centre of gravity' of a body, and find the centre of gravity of a thin uniform triangular lamina.

5. Describe the different kinds of levers, giving one familiar instance of each kind.

6. An iron rod weighs 12 lb. per foot length. It balances about a point 1 foot from one end when a weight of 288 lb. is suspended from that end. How long is the rod?

7. Define 'relative velocity.'

A steamer is going due west at 14 miles per hour and the wind appears from the drift of the clouds to be blowing at 7 miles per hour from the north-west. Find its actual velocity.

8. Define 'acceleration of a moving point.'

A body starting from rest and moving with uniform acceleration describes 342 feet in the tenth second. Find its acceleration.

9. A body is projected vertically upwards with a velocity of 3,270 centimetres per second. How high does it rise, and for how long is it moving upwards?

10. State Newton's Second Law of Motion.

When a body is projected in vacuo under gravity, prove that its path lies in a vertical plane and that the horizontal component of its velocity is constant.

### ELEMENTARY HYGIENE

*Paper-Setters*— { COL. A. D. STEWART, M.B., Ch.B., F.R.C.S.E.,  
D.P.H., D.T.M.&H., I.M.S.  
RAI BAHADUR UPENDRANATH BRAHMACHARI, M.A.,  
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*Examiners*— { DR. ABDUL MAJID, M.B., D.P.H., D.T.M.  
,, RADHAKRISHNA BANERJEE, M.B., D.P.H.,  
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*Examiners*— { TELUGU  
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URDU  
DR. ABDUL MAJID, M.B., D.P.H., D.T.M.  
URIYA  
MR. MAHESWAR DAS, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*FOUR questions only are to be answered*

1. Mention *two* diseases in Bengal which are caused by the bites of mosquitoes.

How can you help to reduce the number of mosquitoes in a village?

2. Describe any tank you have seen which is used as the source of water supply by the people living near it.

Describe (a) the good points, and (b) the bad points about the particular tank you have in mind.

3. What are 'parasites'?

State *six* parasites of man (*three* of which can be seen with the naked eye, and *three* which cannot be seen by the naked eye). State whether the particular parasites you mention cause any disease or not.

4. Why is it important for the growing boy and girl to have sufficient exercise in the open air?

5. Describe your daily diet.

Is this in your opinion sufficient in amount and in nutritive principles? Give your reasons.

6. Why is it important to take care of the teeth?

Describe what you think is a good method of taking care of the teeth.

## BUSINESS METHOD AND CORRESPONDENCE

*Paper-Setters*—{ S. ZAMAN, B.A., A.C.A.  
MR. NARENDRANATH SARKAR, M.A.

*Examiner*—MR. S. ZAMAN, B.A., A.C.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Attempt any two of the questions marked with an asterisk  
and any FOUR of the others*

*The figures in the margin indicate full marks*

1. A stock-broker's client writes to him inquiring why the price of  $3\frac{1}{2}$  per cent. Government securities has come down from about Rs. 66 to about Rs. 61. The broker replies giving suitable reasons. Draft these two letters. 18

2. What is a telephone directory? What is a numerical list of the directory? Under whose management are the telephone systems in Calcutta worked? 18

3. Give a complete specimen of ruling, with at least six entries, for the purchases journal of a firm that deals in three kinds of cotton goods, *vis.*, socks and stockings, shirting, and underwears. 18



4. The following equivalents are given :— 18  
 One pound sterling equal to four dollars and fifty cents.  
 One dollar equal to three rupees and eight annas.  
 One rupee equal to six francs and fifty centimes.  
 Calculate how much £1. 10s. is equivalent to in French money.
- \*5. What is the difference between a short-term loan and a long-term loan? 14
6. What are the formalities to be gone through before a Public Company can be registered? Give all the details of the procedure. 18
7. Explain any *six* of the following terms and abbreviation :— 18  
 partnership, clearing house, Stock Exchange, Enfaced paper, D/P Bill, R/D, Cash memo., Not negotiable.
- \*8. What is the difference between Insurance and Assurance? 14  
 Write short notes on any *two* of the following :—Life Assurance, Fire Insurance, Marine Insurance, Accident Insurance.
9. (a) Show how the following message may be written in code words :— 18  
 Buy at best price 2,000  $3\frac{1}{2}$  per cent. Government loan. Acknowledge receipt of this telegram by wire.  
 (b) Decipher the following code telegram :—  
 OCATH JOOGY OJAVK BIOC8 OCAZM KLONJ EBKX ARZOY NYHMY.  
 [ADKUH, Acknowledge receipt of this telegram by wire; ARZOY, At or about; BLCY, Buy at best price; BIOC8, Shall we buy; EBKX, Bearer debentures; JOOGY, Government loan; KLONJ, Municipal; MIAGZ, Two thousand; NYHMY, Par; OCATH,  $3\frac{1}{2}$  per cent.; OCAZM, 4 per cent.; OJAVK, Price is too high.]
- \*10. What is discount? 14  
 Distinguish between cash discount and trade discount.  
 Explain how an alteration in the Bank rate of discount can *ease* the tightness of the money market.
11. Give a complete ruling, with all necessary details, of (a) a Bill, and (b) a Receipt.
- \*12. What is meant by (a) export and import trade, and (b) Balance of Trade.  
 Name some of the important export and import trades of Bengal.
-

**MATRICULATION EXAMINATION**  
**COMMERCIAL GEOGRAPHY**

*Paper-Setters*— $\left\{ \begin{array}{l} \text{MR. MOHITKUMAR GHOSH, M.A. (CAL.), B.COM.} \\ \text{,, L. A. NATESAN, M.A.} \end{array} \right.$  (Lond.).

*Examiner*—MR. DWIJENDRAKUMAR SANYAL, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer the FIRST question and any FIVE of the rest*

*The figures in the margin indicate full marks*

1. Draw a map of India showing the river system of Northern India. 20
  2. What do you understand by the 'Mediterranean type' of climate? What crops are generally grown under this type of climate? 16
  3. What do you understand by the 'monsoon lands'? Estimate the economic importance of the Ganges Valley. 16
  4. What are the principal agricultural and mineral products of Bengal? State them in order of their relative importance. 16
  5. What are the natural conditions for the cultivation of any *one* of the following products :—(a) rice, (b) wheat, (c) cotton? 16
  6. Describe the import and export trade of India, and mention the ports taking part in that trade. 16
  7. Write short notes on the importance of water-power and petroleum. 16
  8. Account for the economic importance of any *four* of the following :—(a) Singapore, (b) Marseilles, (c) New York, (d) Hamburg, (e) Karachi, (f) Calcutta, and (g) Alexandria. 16
-

# I.A. AND I.Sc. EXAMINATIONS

## 1933

### ENGLISH

#### FIRST PAPER

*Paper-Setters*— { Mr. W. C. WORDSWORTH, M.A.  
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 PH.D.

*Examiners*— { MISS STELLA BOSE, M.A.  
 MR. MANIKUMAR MUKHERJEE.  
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 „ ACHYUTAKUMAR DATTA, M.A.  
 „ NRIPIESCHANDRA GUHA, M.A.  
 „ HARICHARAN MUKHERJEE, M.A.  
 „ SATYASARAN KAHALI, M.A.  
 „ DEBENDRANATH CHATTERJEE, M.A.  
 „ PRAPHULLARANJAN DHAR, M.A.  
 „ PRAPHULLAKUMAR DAS.  
 „ BANIKANTA KAKATI, M.A.  
 „ BIBHUTIBHUSHAN GHOSHAL, M.A.  
 „ PRAPHULLAKUMAR BANERJEE, M.A.  
 „ SOMNATH MAITRA, M.A.  
 „ JITENDRANATH DASGUPTA, M.A.  
 „ NIRENDRANATH RAYCHAUDHURY, M.A.  
 „ DIHIRENDRANATH MUKHERJEE, M.A.  
 „ TAHER JAMIL, M.A.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*With regard to Question 5, no credit will be given for  
 incomplete or incorrectly worded quotations*

*The figures in the margin indicate full marks*

1. *Either,*

' Shall I be tempted to infringe my vow  
 In the same time 'tis made? I will not.'

Show how this iron mood of Coriolanus is gradually made to  
 melt into one of yielding 'compassion.'

Or, ' I seek 25  
This unfrequented place, to find some ease—  
Ease to the body some, none to the mind  
From restless thoughts.'

What are these 'restless thoughts' that trouble Samson, whenever he is alone?

2. Either, Give a sketch of the social side of life at 'Auburn' 25  
in its best days.

Or, ' And yet, perhaps, if countries we compare, 25  
And estimate the blessings which they share,  
Tho' patriots flatter, still shall wisdom find  
An equal portion dealt to all mankind.'

Illustrate this remark with reference to Italy and Switzerland.

3. Give for four of the following passages (a) the context, (b) a 28  
note clearly bringing out the sense, (c) comments on the expressions  
in italics :—

- (i) Thou hast affected the *fine strains of honour*,  
To imitate the graces of the gods;  
To tear with thunder the *wide cheeks o' the air*,  
And yet to charge thy *sulphur with a bolt*  
That should but rive an oak.
- (ii) And there, O memory more sweet than all!  
Lived he, whose eyes keep yet our *passing light*;  
Whose *crystal lips* *Athenian speech* recall;  
Who wears *Rome's purple* with least pride, most right.
- (iii) He saw not far; his eyes were dim :  
But ours he swore were all *diseased*.  
' *A ship of fools* ' he shrick'd in spite,  
' *A ship of fools* ' he sneer'd and wept.
- (iv) I still had hopes, my *latest hours to crown*,  
Amidst these *humble bowers* to lay me down;  
To husband out *life's taper* at the close,  
And keep the flame from wasting by repose.
- (v) The canvas glow'd, beyond e'en nature warm,  
The *pregnant quarry teem'd* with human form;  
Till, more unsteady than the southern gale,  
Commerce on *other shores* display'd her sail.
- (vi) For want of me *the world's course will not fail* :  
*When all its work is done, the lie shall rot*;  
The truth is great, and shall prevail,  
When none cares whether it prevail or not.

4. Write notes on four of the following :—Luke's iron crown; 10  
that *Ægean Isle*; brighter streams than fam'd *Hydaspes*; her vacant  
interlunar cave; His pity gave ere charity began; hireling wolves,  
whose Gospel is their maw.

5. Either, Quote from memory two of the following :— 12

(a) Coriolanus on Valeria.

(b) The two similes introduced into Goldsmith's sketch of the  
Village Preacher.

(c) ' I dark in light, exposed  
To daily fraud, . . .  
Without all hope of day.'

(d) 'The fairest things have fleetest end,

And leaves fell from that day.'

Or, Give for two of the following passages (a) the context, 12  
(b) notes on the points indicated :—

(i) 'Her skin was like a grape, whose veins

Run snow instead of wine.'

Clearly explain the contrast implied in the last line.

(ii) 'Where lingering art kindled her latest fires !'

What were these 'latest fires' ?

(iii) 'The swan on still St. Mary's lake

Float double, swan and shadow.'

Scott, in quoting these lines from memory, substituted 'sweet' for 'stil.' Do you think it was an improvement?

(iv) 'My shame in crowds, my solitary pride.'

Bring out the force of the antithesis in this line.

(v) 'New foes arise,

Threatening to bind our souls with secular chains.'

What 'new foes' are alluded to? What is meant by 'secular chains'?

## SECOND PAPER

Head Examiner—DR. SRIKUMAR BANERJEE, M.A., PH.D.

Examiners—	{	MR. BHOLANATH CHAKRABARTI, M.A.
		„ MOHINIMOHAN MUKHERJEE, M.A.
		„ HRIDAYRANJAN LAHIRI, M.A.
		„ AMIYAKUMAR SEN, M.A.
		„ JYOTSNAMAY BOSE, M.A.
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		„ SUSILCHANDRA DATTA, M.A.
		„ BIJAYRANJAN DASGUPTA, M.A.
		„ KIRTISCHANDRA BANERJEE, M.A.
		DR. SATYENDRAKUMAR DAS, M.A., PH.D.
		MR. BINODBIHARI BANERJEE, M.A.
		„ JOGENDRAKUMAR CHAUDHURI, M.A., B.A.
		(Oxon.).
		„ DURGAPADA BISWAS, M.A.

„ RAJKUMAR CHAKRABARTI, M.A.  
„ SURENDRANATH CHAKRABARTI, M.A.  
„ JNANADAKANTA GANGULI, M.A.  
„ AMULYARATAN GUPTA, M.A.  
„ NANIGOPAL MOOKERJEE, M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Either, Write a short note on the character of Silas Marner as depicted in the story. 20

*Or, Give a short description of the scene at the Rainbow when Silas Marner went to report the theft of his gold.* 20

*Or, 'I know that, Marner. I was wrong. I've repented of my conduct in that matter.'* 20

What is the matter referred to, and how did the speaker offer to make amends for the wrong?

2. *Either, 'The consequence is that a change to which the history of the old world furnishes no parallel has taken place in our country.'* 20

How does Macaulay elaborate this statement, and what explanation does he suggest to account for this change?

*Or, Give some account either of the military system, or of the conditions of travelling, in England in the reign of Charles II.* 20

*Or, Show how the reaction from extreme austerity to extreme licence which came with the Restoration was reflected in the literature of the time.* 20

3. *Either, Write a brief appreciation of the life and character of the Rev. Robert Walker.* 20

*Or, Tell briefly the story of the Convict's Return, adding your own reflections.* 20

*Or, Give the substance either of Carlyle's advice regarding the study of History, or of Ruskin's comments on the making of money.* 20

4. Write short notes on any *one* of the following:— 8

(a) Jesus' testimony concerning John the Baptist.

(b) The transfiguration of Jesus.

(c) Jesus' teaching on humility and forgiveness.

(d) The Parable of the Prodigal Son.

5. Explain any *four* of the following, adding the context where necessary:— 20

(a) For joy is the best of wine, and Silas's guineas were a golden wine of that sort.

(b) As the child's mind was growing into knowledge, his mind was growing into memory.

(c) And now something had come to replace his hoard which gave a growing purpose to the earnings.

(d) His family pride was beyond that of a Talbot or a Howard.

(e) What, they asked, were the boasted inventions of Archimedes, when compared with the achievements of the man who had turned the nocturnal shades into noonday?

(f) Beneath the caravan all is dry and bare; but far in the rear, is the semblance of refreshing waters.

(g) But there is something that stands above all fingering, all microscopes, and all curious diagnosis, and that is, simply, LIFE.

(h) Slide back into the cradle, if going on is into the grave:—back, I tell you; back—out of your long faces, and into your long clothes.

(i) Though ye take from a covetous man all his treasure, he has yet one jewel left; ye cannot deprive him of his covetousness.

6. Write short explanatory notes on any *three* of the following:—

(a) The Kingdom of Heaven.

(b) I am not come to destroy, but to fulfil.

(c) I came not to send peace, but a sword. (*Or, I came not to send peace, but the sword.*)

(d) Glory to God in the highest, and on earth peace, good will toward men. (Or, Glory to God in the highest, and on earth peace to men of good will.)

(e) Man shall not live by bread alone. (Or, Man liveth not by bread alone.)

(f) Go, and do thou likewise. (Or, Go, and do thou in like manner.)

### THIRD PAPER

*Head Examiner*—MR. RAJANIKANTA GUHA, M.A.

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*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write a short essay on *one* of the following subjects :— 30
  - (a) The necessity of discipline in all forms of association.
  - (b) Rome was not built in a day.
  - (c) Have the discoveries of science elevated human thought and character?
  - (d) That which is not of advantage to the swarm is not of advantage to the bee.
2. Write an appreciation, in not more than 150 words, of *one* of the following :— 10
  - (a) The services to his country of any distinguished Bengali.
  - (b) Any famous work in Indian literature.
  - (c) The work of any great religious reformer, European or Asiatic.

3. Give in your own words the substance of the following passages :—

(a) *Either*, (i) It is a calumny to say that men are roused to heroic actions by ease, hope of pleasure, recompense—sugar-plums of any kind in this world, or the next. In the meanest mortal there lies something nobler. The poor swearing soldier hired to be shot has his 'honour of a soldier,' different from drill, regulations, and the shilling a day. It is not to taste sweet things, but to do noble and true things, and vindicate himself under God's heaven as a God-made man, that the poorest son of Adam dimly longs. Show him the way of doing that, the dullest day-drudge kindles into hero. They wrong man greatly who say he is to be seduced by ease. Difficulty, abnegation, martyrdom, death, are the allurements that act on the heart of man. Kindle the inner genial life of him, you have a flame that burns up all lower considerations. 20

Or, (ii) The family, like the house in which they live, needs to be kept in repair, lest some little rift in the walls should appear and let in the wind and rain. The happiness of a family depends very much on attention to little things. Order, comfort, regularity, cheerfulness, good taste, pleasant conversation—these are the ornaments of daily life, deprived of which it degenerates into a wearisome routine. There must be light in the dwelling, and brightness and pure spirits and cheerful smiles. Home is not usually the place of toil, but the place to which we return, and rest from our labours; in which parents and children meet together and pass a careless and joyful hour. To have nothing to say to others at such times, in any rank of life, is a very unfortunate temper of mind, and may perhaps be regarded as a serious fault; at any rate it makes the house vacant and joyless. 20

(b) *Either*, (i) I have lain in the sun,  
I have toiled as I might,  
I have thought as I would,  
And now it is night. 20

My bed full of sleep,  
My heart of content,  
For friends that I met  
The way that I went.

I welcome fatigue,  
While frenzy and care,  
Like thin summer clouds,  
Go and melt in the air.

To dream as I may  
And awake when I will,  
With the song of the birds  
And the sun on the hill.

Or death—were it death,  
To what should I wake,  
Who loved in my home  
All life for its sake?

What good have I wrought?  
I laugh to have learned  
That joy cannot come  
Unless it be earned.



For a happier lot  
 Than God giveth me  
 It never hath been  
 Nor ever shall be.

- Or, (ii) One lesson, Nature, let me learn of thee, 20  
 One lesson which in every wind is blown,  
 One lesson of two duties kept at one  
 Though the loud world proclaim their enmity—  
 Of toil unsevered from tranquillity;  
 Of labour, that in lasting fruit outgrows  
 Far noisier schemes, accomplish'd in repose,  
 Too great for haste, too high for rivalry.  
 Yes, while on earth a thousand discords ring,  
 Man's fitful uproar mingling with his toil,  
 Still do thy sleepless ministers move on,  
 Their glorious tasks in silence perfecting  
 Still working, blaming still our vain turmoil,  
 Labourers that shall not fail when man is gone.

4. Either, What is meant by *paradox* and *irony*? Give an 10  
 example of each.

Or, Distinguish between *simile* and *metaphor*; and comment 10  
 on the metaphors of *four* of the following with reference to their origin :  
 —iron-hearted conquerors; the golden age; that isn't cricket; my  
 salad days; brazen impertinence; ebbing fortunes; black ingratitude;  
 he poured cold water on my suggestion.

5. Either, Quote from memory any *four* consecutive lines of blank 10  
 verse and scan them.

Or, Describe the metrical structure and rhyme-scheme of the 10  
 poem, 'One lesson, Nature, let me learn of thee . . .', quoted under  
 Question 3 (b) (ii) and scan the last six lines.

Or, Re-write the following as blank verse without altering the 10  
 order of the words. (N.B. The passage does not begin a line. The  
 first verse consists of three feet and the last contains only one foot.)

My father oft would speak your worth and virtue; and, as I  
 did grow more and more apprehensive, I did thirst to see the man  
 so raised. But yet all this was but a maiden-longing, to be lost as  
 soon as found; till, sitting in my window, printing my thoughts in  
 lawn, I saw a god, I thought (but it was you), enter our gates: my  
 blood flew out and back again, as fast as I had puff'd it forth and  
 sucked it in like breath.

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## BENGALI VERNACULAR

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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, What is the highest object of man's life according to Bankim Chandra Chatterjee? 10

*Or*, Give in your own words the anecdote of Ishā Khān's bravery at the siege of the fort of Egāra Sindhu. 10

2. Explain with reference to the context any *two* of the following extracts :— 12

(a) এ জীবন ভবিষ্যৎ পারলৌকিক জীবনের জন্ত পরীক্ষামাত্র—পৃথিবী স্বর্গলাভের জন্ত কর্মভূমিমাত্র—এ কথা যদি বার্থ হয়, তবে পরলোকে স্মরণার্থ কার্যের অস্তিত্বই জীবনের উদ্দেশ্য হওয়া উচিত বটে।

(b) ঋষির মুখ অপূর্ণ শ্রী ধারণ করিল, তিনি বলিলেন, “তাহাকে ভালবাসি বলিয়াই ত তাহাকে ব্রহ্মর্ষি বলি নাই; আমি তাহাকে ব্রহ্মর্ষি বলি নাই বলিয়াই তাহার ব্রহ্মর্ষি হইবার আশা আছে।”

(c) পদযধ্যাদা, সম্মান, প্রতিষ্ঠা, বশ তাঁহাকেই অধেষণ করিয়া বরণ করিত, তিনি কখনও তাহাদের জন্ত লোলুপ হয়েন নাই ; এবং যখন যশের পুষ্পমালা তাঁহার কণ্ঠে অর্পিত হইত, তখন তিনি সে পুষ্পমালা অফিসের পোষাকের মতই ছাড়িয়া ফেলিতেন ।

(d) রাজকোষের ধনরত্ন বাজালা দেশেই সঞ্চিত থাকিত ; বাহা ব্যয় হইত, তাহাও বাজালাগণ কেহ দ্রব্য-বিনিময়ে, কেহ শ্রম-বিনিময়ে কড়ায় গণ্ডায় বুঝিয়া লইতে পারিত । দেশের টাকা দেশেই থাকিত, তাহা সাত সমুদ্র তের নদীর পারে চির নির্বাসিত হইত না ।

3. Explain any two of the following passages :—

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- (a) চন্দ্রচূড়-জটাঙ্গলে আছিল যেমতি  
জাহ্নবী, ভারত-রস ঋষি বৈপায়ন  
ঢালিয়া সংস্কৃত-হৃদে রাখিলা তেমতি,  
তুষায় আকুল বঙ্গ করিত রোদন ।
- (b) হে সম্রাট, তাই তব শঙ্কিত হৃদয়  
চেয়েছিল করিবারে সময়ের হৃদয় হরণ  
সৌন্দর্য্যে ভূলায়ে ।  
কণ্ঠে তার কি মালা ছালায়ে  
করিলে বরণ  
রূপহীন মরণেরে যুত্ৰাহীন অশরূপ সাজে ?
- (c) যখন হৃদয়-যন্ত্রে ছিঁড়ে যায় তার,  
স্বরহীন হ'য়ে আসে সঙ্গীতের ধার—  
কোথা হ'তে অলঙ্কিতে দাও তুমি সুর ?  
মহান্ সঙ্গীতে হয় প্রাণ ভরপুর !
- (d) নমি হে সার্থক কাষ ! স্বরূপ তোমার  
নিষ্ঠা অভিনব !  
মর দেহে নহ মর, অমর-অধিক  
স্বৈর্য্য ধৈর্য্য তব ।

4. Quote from memory the first six lines of either Michael's 6  
বঙ্গভাষা or Rabin-dranāth's ভারতলক্ষ্মী or Akshay Kumār Baral's  
মানব-বন্দনা ।

5. (a) Construct sentences illustrating the use of each of the following 6  
words both as noun and as adjective :—

পাণ, গুণ্য, গুরু.

(b) Form adjectives from the following :—

14

অধ্যয়ন, প্রার্থনা, পান কামনা.

6. Amplify the idea contained in the following lines :—

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এই যে নৃশংসচিত্ত দহ্য ছরাতার,  
করিছে নৃ-শোণিতাক্ত অসি আপনার  
এই যে ভীষণতর সমর-সাগর,  
বহিছে রক্তের শ্রোত বাহে খরতর ;  
এ সকল অরে অর্থ । শুধু তোর তরে  
আর কে এমন আছে একুপ যে করে ?  
উপেক্ষিয়া সুখময় পরমার্থ ধন,  
তোর তরে দেয় নরে আয়ু বিসর্জন ।  
কুহরব যধুকালে কুহুকুহ-স্বরে,  
প্রবাসী জনের মন বিমোহিত করে ;  
কুরঙ্গ বাঁশীর রবে মাতোয়াল হয় ;  
শঙ্খ নাদে উল্লসিত বীরের হৃদয় ;  
কিন্তু স্নমধুর রবে, রে অর্থ ! তোমার,  
একেবারে মুগ্ধ হয় অখিল সংসার ।

7. Translate into Bengali :—

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While waking about the room, Napoleon asked, 'What sort of a man did you take me to be before you became my surgeon? Give me your real opinion frankly.' The doctor replied, 'I thought you to be a man whose stupendous talents were only to be equalled by your measureless ambition. Although I did not give credit to one tenth part of the libels which I had read against you, still I believed that you would not hesitate to commit a crime when you found it to be necessary.' 'This is the answer I expected,' replied Napoleon, 'I have risen to too great a pitch of glory not to have excited the envy of mankind.'

8. Write an essay on any one of the following :—

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(a) Outdoor games : some instances—evils of neglecting them—  
influence of games on character.

(b) Facilities of transport : conveyances and vehicles, ancient and  
modern—their advantages and disadvantages.

(c) Plain life : evils of luxury—spare time and means of self-culture  
—fitness of vicissitudes of fortune—possibility of selflessness.

## HINDI VERNACULAR

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Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Explain in Hindi with reference to the context any two of the following passages :—

(a) लहो बाहुबल जीति कै जो तुव पुरखन राज । 8

सो तुम जूआ खेलि कै जीत्यो सहित समाज ॥

अब भीलन की भांति इमि छिपि कै चोरत गाय ।

कुल-गुरु ससि तुव नीचपन लखि कै रह्यो लजाय ॥

(b) अपनी प्रकृति पसार पलक में सिगरो जगत भुलावे । 8

ढूँढि ढूँढि थाके ब्रह्मादिक इनको पार न पावे ।

करो प्रगाम परसि पग सिर सो' हिलि मिलि दोऊ भइया ।

गवाल बाल लै चले बिपिन को आगे दे सब गइया ॥

(c) उसकी चोटी की सटकाई लख नागिन अपनी कँचली छोड़ सटक गई । भौहे की बँकाई निरख धनुष धक धकाने लगा, आंखों की बड़ाई चंचलाई पेख मृग मीन खंजन खिसाय रहे । नाक की निकाई निहार तिल फूल मुरझाय गया । 8

2. (a) Lallu has used देख, पेख, लख, निरख, and निहार 4  
evidently in the same sense. Is there any difference in their meanings? Which of them are exclusively used in poetry?

(b) What are the four kinds of पतिव्रता described by Anasūya? 4

3. Express any two of the following passages in simple Kharboli prose :—

(a) मित्रों के साथ बराबरी और परिहास करना दूषणीय नहीं है 8  
पर वहीं तक कि उनकी और अपनी योग्यता बनी रहे तथा उनका कोई सच्चा दोष न प्रकाशित हो । एवं उन्हें उत्तर देने में संकोच व लज्जा न लगे । इसके अतिरिक्त साधारण परिचयवालों से भी उपयुक्त ही रीति से वार्त्तालाप करना चाहिये ।

(b) सभीत ब्राह्मणगण ईर्षा बस जलने लगे । पंडितों के पिंडों में 8  
पीड़ा सी होने लगी । नवद्वीप के पंडित वर्ग विद्या दिग्गज तो थे परन्तु विद्यामद तथा पांडित्य द्वारा उपार्जित और संचित धन के मद ने उनके मस्तिष्क को ऐसा बिगाड़ डाला था कि ईश्वरभक्ति को घृणा की दृष्टि से देखते थे ।

- (c) प्रेरित मंत्र ब्रह्मसर धावा ।  
 चक्षा भाजि बायस भय पावा ॥  
 धरि निज रूप गयो पितु पाहीं ।  
 राम विमुख राखा तेहि नाहीं ॥  
 भा निरास उपजी मन तासा ।  
 जथा चक्र भय रिषि दुर्वासा ॥  
 ब्रह्म धाम सिवपुर सब लोका ।  
 फिरा श्रीमत व्याकुल भय लोका ॥  
 काहू बैठन कहा न ओही ।  
 राखि को सकइ रामकर द्रोही ॥

8

4. Amplify the following :—

*Either,*

सबरी गीध सु सेवकनि, सुगति दीन्हि रघुनाथ ।  
 नाम उधारे अमित खल, बेदबिदित गुन गाथ ॥

*Or,*

परहित सरिस धर्म नहि भाई । परपीड़ा सम नहि अधमाई ।

5. Translate one of the following passages into Hindi :—

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(a) There is nothing that we know of in prehistoric Egypt or Mesopotamia or anywhere else in Western Asia to compare with the well-built baths and commodious houses of the citizens of Mohenjo-daro. In those countries, much money and thought were lavished on the building of magnificent temples for the gods and on the palaces and tombs of kings, but the rest of the people seemingly had to content themselves with insignificant dwellings of mud. In the Indus valley, the picture is reversed and the finest structures are those erected for the convenience of the citizens. Temples, palaces and tombs there may of course have been, but, if so, they are either still undiscovered or so like other edifices as not to be readily distinguishable from them.

(b) Those who have read Tod's *Annals and Antiquities of Rājasthān* need not be told in what high estimation the royal dynasty of Mewar is held throughout Rājputāna. 'By universal consent as well as by the gotra of this race,' says he, 'its princes are admitted to be the direct descendants of Rāma, of the solar line.' These are styled Rānas, and are the elder branch of the Sūryavamshī, or 'children of the sun.' Another patronymic is Raghuvamshī, derived from a predecessor of Rāma, the focal point of each scion of the solar race. To him, the conqueror of Laṅkā, the genealogists endeavour to trace the solar lines. The titles of many of these claimants are disputed; but the Hindu tribes yield unanimous suffrage to the prince of Mewar as the legitimate heir to the throne of Rāma, and style him *Hindū Śūraj*, or 'Sun of the Hindus'.

6. Frame sentences to illustrate five of the following :—

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- |                         |                        |
|-------------------------|------------------------|
| (a) कान खड़े करना ।     | (b) बातें बनाना ।      |
| (c) अन्धे की लाठी ।     | (d) आँख लगाना ।        |
| (e) जी चुराना ।         | (e) तीन तेरह कर देना । |
| (f) नौ दो ग्यारह होना । | (f) दम देना ।          |

7. Write an essay of not less than fifteen lines on one of the following subjects :— 20

(a) विद्यार्थी का कर्तव्य - अपने शिक्षकों के प्रति, अपने सहपाठियों के प्रति, अपने गुरुजनों के प्रति, अपने देश के प्रति ।

(b) हिन्दुओं में तीर्थयात्रा - तीर्थयात्रा से लाभ, हिन्दुओं के मुख्य मुख्य तीर्थ, वर्तमान तीर्थों की दशा ।

### MAITHILI VERNACULAR

*Paper-Setter*—KUMAR GANGANANDA SINGH

*Examiner*—PANDIT DEBANANDA JHA

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write explanatory notes on any one of the following stanzas :— 10

(a) एत दिन छलि नवरीति रे । जलमीन जेहन पिरीति रे ॥  
एकहि बचन बीच भेल रे । हसि पहु उतरो न देल रे ॥  
एकहि पलङ्ग पर कान्ह रे । मोर लेखें दुर देस भान रे ॥  
जाहि वन सिकिओ न डोल रे । तहि वन पिआ हसि बोल रे ॥  
धरब जोगियाक भेस रे । करब मजे पहुक उदेस रे ।  
भनई विद्यापति भान रे । सुगुरुष न कर निदान रे ॥

(b) न जानल कोन दोसे गोलाह विदेस ।  
अनुखने झखइते तनु भेल सेस ॥  
बुझहिनि पारल निअ अपराध ।  
प्रथमक प्रेम दइवे कह बाध ॥  
बेरि एक दइब दहिन जजो होए ।  
निरधन धन जँक धरब मोजे गोए ॥  
भनइ विद्यापति सुन वर नारि ।  
धइरज कए रह मिलत मुरारि ॥

(c) साजनि निहुरि फूकू आगि ।  
तोहर कमल भ्रमर देखल मदन ऊठल जागि ॥  
जौ तोह भाविनि भवन जेवह ऐवह क्रोनहु वेला ।  
जौ ई संकट सौं जी बाँचत होएत लोचन मेला ॥  
भन विद्यापति चाहथि जे विधि करथि से से लीला ।  
राजा शिवसिंह बन्धन मोचन तखन सुकवि जीला ॥

2. Describe after Manabodha either how Hari got the appellation Dāmodara, or the incidents that preceded the incarnation of Nārāyaṇa as Kṛṣṇa. 10

3. Write in Maithili either a synopsis of the *Sundara-Samyoganātaka* of Jivana Jhā, or character sketches of सुन्दर, सरला, गिरिधर, and पण्डा as revealed in the play. 10

4. Explain the allusions in one of the following stanzas :—

(a) मदन दहन सौं दगध तन, कहल इन्द्र अकुलाय ।  
शीतल करु निज गुण-प्रकटि, सुन्दरि हृदय लगाय ॥

(b) सुन्दरता गणनायकक, के कहि सक विस्तार ।  
स्वर्य कृष्ण शिवपुत्र भय, लेल जतय अवतार ॥

5. Amplify in Maithili the idea contained in the following :— 15

Ever let the Fancy roam !  
Pleasure never is at home :  
At a touch sweet Pleasure melteth,  
Like to bubbles when rain pelteth ;  
Then let winged Fancy wander  
Through the thought still spread beyond her :  
Open wide the mind's cage-door  
She'll dart forth, and cloudward soar.

6. Translate into Maithili :— 15

One of our great duties toward ourselves, therefore, is to fill our mind with things worth having, and worth being reminded of by association in after years; to avoid foolish books, foolish talk, and things which it is not worth while to have in our minds at all; and to avoid things which are actually wicked or destructive. These may get into the mind by accident before we know what is happening, and at any moment we are liable to be reminded of them. Let us remember that there is no better treasure than a mind well filled with memories of noble things seen, noble sounds heard, noble ideas, great poetry, recollections of friends, and so on. A man with such a mind may say to himself, 'My mind to me a kingdom is,' or may talk with Wordsworth of 'that inward eye which is the bliss of solitude.' We cannot express too strongly the importance of filling the mind with good materials for association.

7. Re-write correctly :— 5

सभजन पुनि गौरि पुजवाकाज ऐली नवनव फुलमाला मालिनि गांथि  
रैली । सविधी कयल पूजा जानकि विश्व धनिया तखन मन पसना भेली  
शैलेन्द्र कान्या ॥

8. In how many ways can you use the words पिबू and अजबाबू to express different meanings in Maithili? Illustrate. 5

9. Write an essay in Maithili on one of the following subjects :— 20

(a) *Hope* :—(i) Introduction. (ii) Its relationship with human life and action. (iii) Its action and reaction on the human mind. (iv) Conclusion

(b) *The Cinema* :—(i) Its origin and growth. (ii) Its utility. (iii) Its evil effects. (iv) Its future.



## ORIYA VERNACULAR

*Paper-Setters*—{ MR. KASINATH DAS, M.A.  
REV. BRAJANANDAN DAS, B.A.

*Examiner*—MR. MAHESWAR DAS, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Explain any two of the following extracts :—

20

(a) ଅରିୟାନେ ତାଙ୍କ ଚରୀ-ମେରୁଦଣ୍ଡେ  
ଯେ ରେଖା ପଡ଼ିଲା ତୋର ନୀଳଗଣ୍ଡେ  
ସେହି ରେଖା ପ୍ରାୟେ ତାଙ୍କ ଯମମାନ  
ନାଚମାଡ଼େ ସିନା ହେଲା ଅନ୍ତର୍ଦ୍ଧାନ ।

(b) ତା କୃପାଣୁ ଅଛି ଗନ୍ଧି ବଳବାନ  
ଅକାଳେ ଏଜାନ ଲରିଲା ଅଜାନ,  
ନାଶିଲା ଗୋହରି କମାଘା ଦେଶିଣି,  
ଦେବ ନଡରଇ ନାର-ରୁକୁଟି ।

(c) ତୋର କୃପାବଳେ ଶୁଦ୍ର ମହାୟାନ  
ତୋ କୃପା ବିହୁନେ ବଡ଼ ହୁଏ ସାନ  
ଖର୍ଚ୍ଚ ଗୋବର୍ଦ୍ଧନ ଗିରୀନ୍ଦ୍ର ବୋଲାଏ  
ମହାତୀର୍ଥରୂପେ ଲୋକେ ପୂଜା ପାଏ  
ସ୍ବରାବେ ଗିରୀନ୍ଦ୍ର ହୋଇ ମେଘାସନ  
ଲରି ନାହିଁ ଗିରି ସମାଜେ ଆସନ ॥

2. Translate into Oriya any one of the following :—

15

(a) The only son of a poor man used to bring him from the market all sorts of articles every day—spices, sweets, knives, and many other things. He did not care to ask the boy whence he got those things. The man ought to have known that the boy had stolen those things. In course of time the boy became a trained thief and was caught red-handed. Age did not reform him but confirmed the wickedness, and the thief was imprisoned by the magistrate.

(b) As young Francis was walking through a village with his tutor, they were annoyed by two or three cur dogs, that came running after them with looks of the utmost fury, snarling and barking as if

they would tear their throats and seeming every moment ready to fly upon them. Francis every now and then stopped and shook his stick at them or stooped down to pick up a stone, upon which the cubs retreated as fast as they came.

3. Re-write the following in simpler language :—

15

ସମୟର ସର୍ବହାରୀ ଗତି ସବୁବେଳେ ଅପ୍ରତିହତ ମନୁଷ୍ୟର ପାଠ୍ୟାବସ୍ଥା କିମ୍ବା ଛାତ୍ରାବସ୍ଥାରେ ସେହି ଅମାୟିକ-ଏକତା ସମୟରେ ମନର ଯେଉଁ ଦେବ, ଉଦାତ୍ତା, ଉଦରାବ, ସଦାତପ୍ତା ପ୍ରଭୃତି ଥାଏ ସମୟ ଦ୍ରମରେ ଚାହାଲୁପ୍ତ ହୋଇ ଚାହାପରିବର୍ତ୍ତରେ ମନୁଷ୍ୟ ହୃଦୟରେ ନରକାନଳ ହିଁ ପ୍ରତିଷ୍ଠିତ ହୁଏ । ପାଠ୍ୟାବସ୍ଥାରେ ସମସ୍ତଙ୍କର ଏକସ୍ୱାର୍ଥ ଥାଏ, ମାତ୍ର ସେ ଅବସ୍ଥା ଅର୍ଚ୍ଚିତ ହେଲା ମାତ୍ର ତେ ସମସ୍ତେହିଁ ସ୍ୱପ୍ନସ୍ୱାର୍ଥ ଓ ଆତ୍ମାରେ ଶକ୍ତ ହୋଇ ପାନ୍ତି ସିନା ॥

4. Explain the following passage in your own language :—

10

ଉପନ୍ୟାସ ଲେଖକଙ୍କୁ ସ୍ୱରୂପ କଥା କହିବାକୁ ହେବ ଏବଂ ସ୍ୱରୂପ-କଥା କହିବାକୁ ଗଲେ ଯଦି କେତେବେଳେ କଠିନ ନୀତିଶାସ୍ତ୍ର ସହିତ ଅଳ୍ପତଳ ବିରୋଧ ଜାତ ହୋଇ ପଡେ ତେବେ ବଡ଼ ବିପଦର କଥା । ସେ ବିପଦରୁ ଉଦ୍ଧାର ପାଇବା ମଧ୍ୟ ସହଜ କଥା ନୁହେଁ । ଛିଦିଏ ଉଣାହେଲେ ଉପନ୍ୟାସର ଅଙ୍ଗହୀନ ହେଲା ବୋଲି ଚିନ୍ତା ପଡିଯିବ ଏବଂ ଛିଦିଏ ବହିକି ଗଲେ ନୀତିଶାସ୍ତ୍ରର ବରଣିଷ୍ୟ ଧ୍ରୋଧପରବତ ହୋଇ ଉପନ୍ୟାସଖଣ୍ଡିତ ସଙ୍ଗରେ ଦୂରକୁ ନିଷେଷ କରିବେ ॥

5. Frame sentences to illustrate the use of the following :—

10

ସୁଦ୍ରପାତ, ହୁଦାୟିତା, ବାନାବାନ୍ଧିବା, ଦାଉସାୟିବା, and ଅଦସରଣିବା

6. (a) Enlarge the following sentence by the addition of nouns, adjectives, adverbs, etc :—

କୁସମ ଗୋରା ପାଉ ଅଛି ।

(b) Give the difference in the meanings of the following pairs :—

4

ଘୋର, ସାଲ ; and ଗୁଡ଼ି and ସୁଦି ।

7. Write an essay on any one of the following subjects :—

20

(a) The benefits of physical culture.

(b) Student life.

(c) A marriage ceremony.

## ASSAMESE VERNACULAR

*Paper-Setters*—{SRIJUT JNANANATH BORAH, B.L.  
MR. SURYYAKUMAR BHUIYAN, M.A.

*Examiner*—MR. AMBIKANATH BORAH, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either, Discuss the following statement in the light of the history of the world :—* 10

বিজ্ঞানৰ বলত যিমানেই বেপাৰ-বানিজ্যৰ উন্নতি হৈছে সিমানেই  
জাতীয় ভাব গভীৰ হৈ আহিছে।

*Or, Write a short history of socialism and its effect on universal brotherhood.*

2. *State briefly the part played either by Chitrakṛh or by Kuji in the development of the plot of Kumar-haran.* 8

3. *Give a short account of one of the following :—* 10

- (a) The *paik* system under the Ahoms.  
(b) Assamese *buranji*'s.  
(c) Relations of the Ahom government with the frontier tribes.  
(d) The functions and privileges of the three *Dangarias* under Ahom rule.

4. *Explain with reference to the context any three of the following passages :—* 3 × 4 = 12

(a) এই ন সভাত নিশ্চল কৰি পূৰ্বৰ সভ্যতা অনাটো সম্বৰনে ?  
ই বাস্তবতে জগতৰ অশকাৰীনে ?

(b) বাপৰ ধন ভৈলে বৰিষ নাহি যায়।  
ভাইৰ ধন ভৈলে তাক দেখিতো নাপায় ॥  
স্বামীৰ বস্তুত সৰ্বকালে উপভোগ।  
মাব দশ ভাই চাহিবাক নোহে ষোগ ॥

(c) নিমাতী হিয়াৰ কিন্তু মাত পোৱা টান,  
হৃদযষে ইমান লাঞ্ছক !  
সখী চিত্ৰলেখা মোৰ কলপনা স্নন্দৰী  
সমিধান দিয়া আহি যোক।

(d) জীৱনৰো আলিকাষে ফুৰিছে উফৰি  
জিলিকি সপ্নৰ স্নৰ্ধ—মৰম লাহৰী।  
সপ্ন শুচি জায় সঁচা চকুৰ আগত,  
যদি চাব জানা এই স্নন্দৰ জগত।

(e) পূৰ্ববস্তুত প্রচলিত থকা ভাষাবোৰতকৈ অসমীয়া-বিলাকৰ  
ভাষা সম্পূৰ্ণ বেলেগ।

(f) কীৰ্ত্তিচক্ৰ বৰবৰুৱা, বদনচক্ৰ বৰফুকন আৰু সংৰাম ভূতৰ পুতেক প্ৰভৃতি ধুমকেতুৰে জয় লৈ আহোম ৰাজ্য-গগনত বিদ্ৰোহ আৰু গৃহকন্দলৰ অমঙ্গলীয়া লক্ষণ বিস্তাৰ কৰে।

5. *Et iher*, Amplify the idea contained in one of the following 15 passages :—

- (a) পৰত আশ বনত বাস।  
 (b) বহাৰ বহদৈ তিশামৰ ভাদৈ  
 শলগুৰীৰ আভোগী বাই,  
 তিনিওৰে ডিক্তিত ধৰি তিনিওৰে কান্দিছে,  
 সম্বন্ধৰ একোৱেই নাই।  
 (c) হৰিনাম বসে বৈকুণ্ঠে প্ৰকাশে  
 প্ৰেম-অমৃতৰ নদী।  
 শ্ৰীমন্ত শঙ্কৰে পাৰ ভাজি দিলা  
 বহে ব্ৰহ্মাণ্ডক ভেদি ॥

Or, Give the substance, in Assamese, of the following passage :—

ধন অমৃত-প্ৰবাহৰ এটা ধাৰা। ধনেৰে সংসাৰ-স্মলভ সকলো সম্পদ ক্ৰয় কৰিব পাৰি। কিন্তু ধন গৰল-প্ৰবাহৰো এটা প্ৰধান ভূমুক। ধনৰ পৰা যেনে সম্পদ উদ্ভৱ হয়, তেনে নানাবিধ বিপদো উদ্ভৱ হয়। হুচিস্তা, কন্দল আৰু ভয় ধনৰ লগৰীয়া। অত্যাচাৰ উৎপীড়ন ধনৰ ধৰ্ম্ম। ধনে দৈন্ত্ৰ হৰণ কৰে সত্য, কিন্তু দৈন্ত্ৰই সংসাৰৰ গৰল নহয়। সংসাৰ-গৰল নানাবিধ কটু উপাদানেৰে নিৰ্ম্মিত। গৰল-প্ৰবাহ অসংখ্য ধাৰাৰ সমষ্টি। ধনে সেই ধাৰা-সমূহৰ এটা হৰণ কৰি তাৰ মূলত সহস্ৰটা যোগ দিয়ে। কিন্তু শাসিত বৃত্তিৰে সৈতে গোটি খাই ধনে নিভাজ অমৃত উৎপাদন কৰিব পাৰে। ধনৰ প্ৰযুক্তি ভাল হলে সি নিজৰ আৰু আনৰ দুখ হৰণ কৰি অমৃত বিস্তাৰ কৰিবলৈ সক্ষম হয়। এতেকে ধনৰ পক্ষেও বৃত্তি-শাসন নিত্যন্ত প্ৰয়োজন। কেৱল ধনোপাৰ্জন উপায় শিক্ষা কৰিলেই অমৃত লাভ নহয়। অমৃত পথৰ লোকে অৰ্থকৰী বিত্তা আৰু গৰলহাৰী জ্ঞান উভয়কে যতনাই লৈহে সংসাৰত থেৰা যেনে।

6. Translate into Assamese one of the following passages :—

15

(a) I was a native of Udarbund, in the country of Cachar. I have been a prisoner of war in Ava. I was seized at my native village, about twenty months ago, by a party of Burmese belonging to the army. About six thousand persons, including men, women and children, were seized about the same time. We were all taken away from Cachar. We were treated with great rigour; we were chained two and two, got very little food, were made to carry heavy loads on the march. Women, with infants at the breast, and who on this account could not carry loads, had the infants snatched from them, their heads chopped off before them, and their bodies thrown into the rivers. I have witnessed murders of this description twelve or thirteen times myself. Old and sick persons, who could not carry

burdens, were often killed by the Burmese soldiers; and their loads, which consisted of plunder, were divided among the other prisoners—Statement of Muhammad Ruffi recorded in June 1826.

(b) In the first century of the Christian era there ruled in Kāmrupa a great king whose wealth and power were the talk of the whole of India. He had a daughter named Amritaprabhā. Her beauty and accomplishments attracted many redoubtable princes of Hindustan to her *swayamvara* ceremony which was held at Prāgiyotisha, the then capital city of Kāmrupa. The bride-elect, dressed in her finest costumes and ornaments, moved from one prince to another, accompanied by a magical umbrella which cast its shade only upon the heads of princes who were destined to be great and famous. Juvārāj Meghavahana, son of Gopaditya, a descendant of the Gonandiyā kings of Kashmir, was among the numerous throng of suitors. When Amritaprabhā approached this prince the umbrella cast its shady beams upon his head; and the bridegroom's garland was offered to Meghavahana. The happy pair, on the termination of the usual marriage ceremonies and festivities, went to Gandhara where Gopaditya was living as an exile under the protection of the king of that country. Aryyārāj, the king of Kashmir, renounced the throne and became a Buddhist sannyāsi, and the people selected Juvārāj Meghavahana as their sovereign. Queen Amritaprabhā exerted her benign influence in the promotion of Buddhism, and the shrine known as *Amritabhavan* has kept the name of this Assamese princess still green in the memory of the Kashmiris.

7. Re-write the following passage correcting the mistakes where necessary :— 10

১৭০৭ খৃষ্টাব্দত আউৰংজেব পাৰ্শ্বাহৰ মৃত্যু। সন্দ্বীহান সম্ভাৰত  
দ্বীপলিয়া শাশনৰ ধ্যেত মোগল-সাম্ৰাজ্যৰ তৰীখনী হুৰী হুৰী। তেনে  
অবস্থাত অচমৰ দুৰ্দমনিয়, স্থশিক্ষিত, সকলো কামতে পঢ়ু, মৰনক তেঁও  
নকৰা, বাঘৰ আগত অগা-দেইয়া কৰা, দুখ-ভাগৰ নজনা বিলাষৰ মুখ  
নেদেখা, প্ৰলোভণৰ হাত শাৰিৰ পৰা অয়েৰ চাৰী লাখ শৈল্যৰ অধীপতী  
শ্ৰীশ্ৰীমহাবাজাধীৰাজ ৰুদ্ৰসিংহ চৰ্গদেব আৰু তেওঁৰ লগৰিয়া গোহাঁই,  
ফুকন, বৰুৱা, হাৰবাৰীকা, সহকিয়া, দড়ং, কচাৰা, জয়ন্তিয়া, বানি, বেলটলা,  
আদি শামন্ত-নৃপতীসকলৰ সমবেট শমৰসক্তিয়ে ভাৰতৰ গতি অইনফালে  
পোনাৰ পাৰিলে হেতেন। তাৰ ফলে অচমিয়াৰ কৃষ্টি অচমিয়াৰ সত্যতাৰ  
প্ৰভাৱ আজি কুম্বাৰীকা অন্তৰ্ভূপৰ পৰা হিমগিৰীৰ পদপ্ৰান্তলৈকে দেখা  
গল হেতেন। এনে চেষ্টা, এনে বিছক্ষন জলন্ত সম্ভাবনা অচমিয়াৰ জাতিয়  
জিবনত এয়ে প্ৰথম আৰু এয়ে শেষ।

8. Write an essay in Assamese on one of the following subjects :—

20

- The influence of English literature on Assamese literature.
- 'Rome was not built in a day'.
- The tea industry in Assam.
- One of the following Assamese authors :—Lakshminath Bezbarua, Padmanath Gohain-Barua, Hemchandra Goswami, Satyanath Bara, Hiteswar Barbarua.
- Music and its influence on man's character.
- The qualities and equipment necessary for success in business enterprises.
- The future of the Assamese.

## URDU—VERNACULAR

*Paper-Setter*—MAULVI A. F. M. ABDUL KADIR, M.A.

*Examiners*—{ MAULVI M. MAHFUZAL HAQUE, M.A.  
,, NASIR ALI KHAN, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write down the substance of Hālī's discourse on زبان گويا 7
2. Give the gist of Nazīr Ahmad's essay on ریاضت جسمانی 8
3. *Either*, Write down in your own Urdū the purport of the following :— 9

شیخ ایک نہایت صحیح المزاج قوی اور جفاکش آدمی تھا۔ اس کے قوی کا اندازہ اس سے ہو سکتا ہے کہ اس نے دس بارہ حج پیادہ پا کئے تھے اور اپنی عمر کا بہت بڑا حصہ صحرائورڈی اور بادیدہ پیمائی میں بسر کیا اور ایک سو بیس برس کے قریب عمر پائی۔

اس نے صرف پیادہ پا ہی سفر نہیں کئے بلکہ بعض اوقات ننگے پاؤں چلنے کا بھی اتفاق ہوتا تھا۔ جس طرح اہل سلوک نفس شکنی کے لئے اپنے مشائخ کے اشارہ سے سالہا سال ادنیٰ درجہ کا کلم اور محنتیں کیا کرتے ہیں اس نے بھی بیت المقدس اور اسکے گرد و نواح میں ایک مدت تک سقائی کی تھی \*

*Or*, Discuss the difference, according to Muḥammad Husain Āzād, between the styles of prose-writing in English and Urdū respectively.

4. Give a brief account of the life of Khwāja Ḥaidar 'Alī Ātash, and also give an estimation of his poetry. 7
5. Explain in simple Urdū one only of the following extracts :— 9

(a)

نہ بوریا بھی میسر ہوا بچھانے کو  
ہمیشہ خواب ہی دیکھا کئے چہرہ کھت کا  
مطیع نفس نہ اللہ نے کیا مجھ کو  
نہ میں نے پیروی غول کی نہ میں بھٹکا

نہ پھول بیٹھہ کے بالائے سرو امی قمری  
 چڑھے جو بانس کے اوپر یہ کام ہے نت کا  
 عجیب بھول بھلیاں ہے غفلت ہستی  
 جسے کہ راہ ہوئی اس سے خوب ہی بھٹکا  
 عجب نہیں ہے جو سودا ہر شعر گہنی سے  
 خراب کرتا ہے آتش زباں کا چٹکا

(b)

ابتداءے عشق ہے روتا ہے کیا  
 آگے آگے دیکھئے ہوتا ہے کیا ؟  
 قافلہ میں صبح کے اک شور ہے  
 یعنی غافل ہم چلے سوتا ہے کیا ؟  
 سبز ہوتی ہی نہیں یہ سرزمین  
 تخم خواہش دل میں تو ہوتا ہے کیا ؟  
 یہ نشان عشق ہیں جاتے نہیں  
 داغ چھاتی کے عبث دھوتا ہے کیا ؟  
 غیرت یوسف ہے یہ رقت عزیز  
 میر اسکو رائگان کہوتا ہے کیا ؟

6. Illustrate the uses of the following idioms in short sentences :— 10

دل بیٹھنا - کام آنا - بیٹھہ دکھانا - کام پڑنا - کام دینا

7. Write down in your own Urdu the substance of the following 15 lines :—

نظیر زندگی کے تمام لطفوں اور حظوں سے خوب بہرہ اندوز  
 ہوتے تھے - وہ ہندو مسلمانوں کے تہواروں میں شریک ہوتے  
 اور انکے میلوں ٹھیلوں کی خوب سیریں کرتے تھے - انہیں سیر  
 تماشوں میں ان کا پائے تہذیب کبھی پھسل جاتا ہے اور وہ  
 بے تکان اڑانے لگتے ہیں مگر یہ ضرور ہے کہ انہیں چیزوں سے وہ  
 مفید مطلب اور اخلاقی نتائج بھی نکالتے ہیں اور بقول شیکسپیر  
 پتھر سے وعظ سنتے ہیں اور ہر چیز میں اچھائی دیکھتے ہیں ۔

یہ انکی خصوصیت ہے کہ انہوں نے دنیا کے مختلف اشغال اور  
کھیل تماشوں کا حال اس مزے سے اور ایسے جوش مسرت کے  
ساتھ لکھا ہے کہ معلوم ہوتا ہے بچوں کی طرح وہ خود ان سب  
میں شریک ہیں \*

8. Translate into simple and idiomatic Urdū :—

15

Mullā Nūru'd-Dīn 'Abdu'r-Rahmān Jāmī, who was born at the little town of Jām in Khurāsān on Sha'hān 23, 817 (A.H.), and died at Herat on Muharram 18, 898 (A.H.), was one of the most remarkable geniuses whom Persia ever produced, for he was at once a great poet, a great scholar and a great mystic . . . He was held in the highest honour by his contemporaries, not only by his fellow countrymen, but even by the Ottoman Sultān, who vainly invited him to visit his court. By his most illustrious contemporaries he was regarded as so eminent as to be beyond praise, and so well known as to need no detailed biography.

9. Write a short essay on one of the following subjects :—

20

(a)

حاصل تجھے بصارت یعقوب ہو اگر  
یوسف بغیر کوئی یہاں کا رواں نہیں

(b)

خدا کی راہ میں دینا ہے گھر کا بھر لینا  
ادھر دیا کہ ادھر داخل خزانہ ہوا

(c) Anīs: a brief sketch of his life; a reference to his family; the branch of Urdū poetry in which he specialised; his influence on Urdū literature and characteristics of his style.

## PERSIAN VERNACULAR

*Paper-Setter and Examiner—DR. P. D. BRAGANÇA CUNHA*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Either, Give in your own Persian an account of the visit of the 12  
Shah of Persia to the Bank and Tower of London.

Or, Write in Persian an account of Bahrām-gūr's visit to India,



2. Give the substance of the following lines in Persian :—

14

گوسفند بزبان حال از شبان پرسید که بچه قوه برنوع ما  
تسلط یافته اید گفت بقوه عقل خیر را از تمیز میدهم و در امور  
تصرف میکنم گفت آیا این قوه شما را دادار میکند که بیرحمانه  
خون ما را بریزد و از کشتن هر جاندارى پرهیز نمیکند و امثال  
و اقران خود را بهوای نفس میکشید و حقوق اجتماعى همدیگر را  
پایمال میسازید و هر قدر بیشتر متمدن میشوید بیشتر اسباب  
و آلات قتل خود تانرا فراهم می آورید آیا انسانها در عصر حجرى  
راحت تر و آسوده تر ازین عصر نورانى نبودند درین دوره ترقی تمدن  
هزاران نفوس را یک دقیقه محروم نابود میکند \*

3. Give the meanings of the following expressions and frame sentences to illustrate their use :— 14

سر خوردن - پا برکاب - چشم سفید - پوست کلفت -  
چاقم زدن - گربه رقصانى - اهل بخیه \*

4. Give in your own words an account of مانى نقاش as given in your text-book. 10

5. Give Persian equivalents for :—*To carry coals to Newcastle. A widow's mite. Out of the frying pan into the fire. He is close-fisted. Make hay while the sun shines.* 10

6. Write an essay in Persian on one of the following :— 20

- (a) Country life.
- (b) The book you prefer, and why.
- (c) Advantages of education.

7. Translate into Persian :—

20

He had continued his business for several years, and had neglected his health through his perseverance and industry, when he felt all at once that his strength was failing, and that he would soon be exhausted unless he permitted himself at times to take some recreation. He therefore very willingly resolved to buy a fine estate by the side of a river in the country combining means for hunting and fishing.

## SINHALESE VERNACULAR

*Paper-Setter and Examiner—REV. P. SEELANANDA*

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any two of the following passages into English :— 20

(a) භූරිපුත් මහවුග ලක්මහසුඛි ඇමහණ බබුණේ උතුව පිරිවැරව වැවෙකි. තමහව විරුඳවු බබුණ්හොම අවිරුඳව ගිහකාමව වැවෙයි. උතුම් කුලෙන් පැවී වුවුයේය. නොනවතුලෙන් පැවීවුවුයේය. මහනඩන ඇති මහත් හොඟ ඇති සමාධිකුලයෙන් පැවී වුවුයේය. පරරවින් සෘත්‍ය පණ්ණිත අදිනුද් දෙව් බබ නා ගජඞ් අදිනුද් පැන පුලුවස්නව එති.

(b) එකල්හි රජ භෑමසේම රටසමාධනව දූන පෙ රෙවි බබුණ කැදවා නෙණ “අවායයි ; කාගේ උපා යෙන් රට සොරහුද් නැතිවුග. ධනබානියෙන් කො වාර දහස් ගණන් පිරිණ. රටවැසසනවද හය නැති විය. මම් මහායාග කවරි යෙමි. පරලොවද සුව වීදිනා සදිහාය. මට අනුශාසනා කරණුමැනවැයි” කිය.

(c) එකල්හි රජ ඉතාමැනවැයි තිවිසගෙණ ගො විකම් කවරියනව බිජුවක් හුදලුකැහි සිවැල් දින. වෙණෙදුම් කවරියනව බබු මිල දින. නමා සැමවැටි යනව මවු නොවුන් තිබු පරිදේදන් නිමද දිවෙල් තනතුරු ගම් නිසම්ගම්දින.

2. Give the substance of the following stanzas :—

20

අහසින් අවුත් මිණි අක්කසිදු යැදුම      ට  
 රහතන් වැදෙහිවුනිහිද මිණිප්ලහ පි      ට  
 දහමුත් දෙසු නැතැකල සැටරියන්කො      ට  
 මහද ගැබ් හිමින් වදු සොළොසනැත්තිට  
 පිත්මද පුතුන් සියයක් ලදුවත් නිස      රු  
 ගුණනැණ බෙලෙන් පුතු පුතුමය ඉතාන රු  
 එක පුත් සඳින් දුරුවෙයි ලොවගන අදුරු  
 තෙතතරු රැසින් එලෙසට තොමවෙයිදු රු

3. Explain with reference to the context, adding notes where necessary :—

20

සැත්තෙහි පාපය      රු  
 අපරාධය පුරාණය      දු  
 දිගුරතාවලි දුරු පුරාණය පුරු      දු  
 සියපත සිය සියපත සියපත නම      දු

4. Write an essay in Sinhalese on any one of the following subjects :—

20

- (a) Evils of bad company.  
 (b) Good manners.  
 (c) Friendship.  
 (d) Civilization.

5. Translate into Sinhalese :—

20

Then the Magadha King Seniya Bimbisāra, when he understood that the Blessed One had accepted his invitation, rose from his seat, respectfully saluted the Blessed One, and passing round him with his right side towards him, went away. And when the night had elapsed, the Magadha King Seniya Bimbisāra ordered excellent food, both hard and soft, to be prepared, and had dinner-time announced to the Blessed One, in the words, "It is time, Lord, the meal is ready," and in the forenoon the Blessed One, having put on his under-robe and with his robe on entered the city of Rajagriha.

## BURMESE VERNACULAR

*Paper-Setters*—{ MAUNG WE LIN.  
MAUNG BA, B.A.

*Examiner*—PROF. PE MAUNG TIN, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. (က) ဝဇ္ဇပါဠိရကန်တွင်ဗာရာဏသီပြည်ရှင်ဗကစောထီးထွတ်ရာဇာသည်ဝဇ္ဇပါဠိကိုသိမ်းပိုက်၍မိဖုရားတင်မြှောက်လိုသောကြောင့်ပရိယာယ်ဖြင့်ကြံစည်ပြုလုပ်သောအကြောင်းများကိုရေးသားဖော်ပြပါ။ 40

(ခ) ရေစကြိုခုံတော်ဖြတ်ထုံးကိုသင်အံလေ့ကျက်ခြင်းအားဖြင့်မည်ကဲ့သို့မဟုတ်တိုးပွားအကျိုးများကြောင်းကိုရေးသားဖော်ပြပါ။

(ဂ) သုတသောမဓင်းကြီးသည်ပေါရိသာဒကိုအကျွတ်တရားရစေရန်ပြောဟောသောတရားများကိုအကျဉ်းအားဖြင့်ရေးသားဖော်ပြပါ။

သို့မဟုတ်။

အောက်ပါစာပိုဒ်၏အနက်အဓိပ္ပာယ်ကိုရှင်းလင်းဖော်ပြပါ။  
မကြာအသက်၊ လျှပ်တပြက်မျှ၊ ကွေးလက်မဆန့်၊ ခဏခန့်ကြောင့်၊  
ပစ်စွန့်မရဲ၊ ရသာစွဲကာ၊ အမြဲရှည်ကြာ၊ သံသရာကို၊ ပမာနှိုင်းကြ၊  
ကြံတွေးဆလော့၊ ညာဏမသန်၊ တိရစ္ဆာန်သို့၊ မဖန်မေ့ကာ၊  
မှတ်မဲ့သာလျှင်၊ အိပ်ကာစားကာ၊ မကျင့်ရာတည့်၊ သူငါမလွတ်၊  
သက်ကြွင်းမှတ်၍၊ ဥပါဒ်ဦးဘင်၊ တွက်ကျုံးလျှင်မူ၊ ဘဝင်ဆိုက်ကာ၊  
ခြောက်ခုရှိ၍၊ တဒါရုံဇော၊ ဂုဇ္ဈေစလန်၊ သတ္တရဝယ်၊ ခဏယေ  
ကား၊ ငါးဆယ်ပြည့်ဖိုး၊ တခုတိုးတွင်၊ ညှိုးကြခန္ဓာ၊ မရဏာလည်း၊  
အကြာမတွက်၊ ဇောငါးချက်မျှ၊ ပျက်ကြတစု၊ ပမာပြုသော်၊ ရှင်  
မှုမရှည်၊ တို့လူပြည်ကား၊ သေရည်မီးတောက်၊ ခဏပျောက်ကို၊

မဖောက်မလွဲ၊ သံမှိုစွဲသို့၊ အမြဲမှတ်ထင်၊ စည်းစိမ်ခင်၍၊ အကြင်  
ရသာ၊ မမက်ရာသည်။ ၊ ပါယ်ရွာအမှားမညွှာတည်း။

[ သုတသောမမျှီ ] ။

(ဃ) အနော်ရထာမင်းစောနှင့်ရှင်အရဟံတွေ့ဆုံဖြစ်ပျက်သော  
အကြောင်းအရာကိုရေးသားပါ။

သို့မဟုတ် ။

နရပတိစည်သူမင်း၏အကြောင်းကိုရေးသားဖော်ပြပါ။

2. ကင်းဝန်မင်းကြီးသည်စင်္ကာပူမြို့မှထွက်၍သီဟိုဠ်ကျွန်းသို့သွား 15  
သော့ခရီးစဉ်အကြောင်းရေးသားထားသောအောက်ပါဆောင်းပါး  
လင်္ကာကိုစကားပြေရေးသားပါ။

သွားလမ်း၊ လာလမ်း၊ စုံစမ်း၍သာ၊ မြို့စင်္ကာတွင်၊ အကြာ  
ရှစ်ရက်၊ နှစ်သစ်တက်၍၊ သုံးရက်မြောက်စ၊ ခုဆဆယ်တိ၊ ရာခွီ  
ထောင်ဧက၊ ဖုသျှနှစ်၊ သက္ကရာဇ်ဦးအခါဝယ်၊ ပြီဿခါညီ၊ ရာသီ  
ဆန်းတက်၊ နှစ်ရက်သောကြာ၊ ဤအခါတွင်၊ မဟာသာဂရ၊ စခန်း  
စပြန်၍၊ လကလည်းဆန်းသစ်၊ နှစ်ကလည်းဆန်းခါ၊ စက်ယဉ်သာ  
ကလဲ၊ သညာအကျော်၊ စင်းခေါ်သည့်သင်္ဘော၊ လျင်ဆောတိုက်  
ရိုက်၊ အကျိုက်အကြို၊ အခိုက်တွင်ဆုံချက်ကို၊ စေ့စုံအောင်ပြောမလွယ်  
ဘူး၊ ပင်လယ်စခန်း၊ မပန်းမမော၊ ဖြန်းတောလျင်ထွေ၊ ထွက်ခဲ့  
လေ၍၊ နေခုနစ်ခါထွန်းလျှံဝါလျှင်၊ လင်္ကာကျွန်း၌၊ စခန်းကြိုက်၊  
ရပ်ဆိုက်နားနေလွန်ရှုဆိတ်၊ အရိယာစစ်၊ မဖြစ်ဘူးထွေ၊ မြေဟူ၍မျှ၊  
ရှာမရဘဲ၊ ရှေးကချန်သျှင်၊ မိုးသဘင်ဝယ်၊ ထွက်ဝင်မြူးကွန့်၊ နေခြည်  
ကိုဟန့်ဘူးသည်၊ ကျွန်းပြန့်ဦးထိပ်၊ ဂါလုဆိပ်တွင်၊ စက်အိပ်ကယ်  
ရှင်မြူး၊ လွန်အကြား၊ ကြည်နူးလှသည်စိတ်နှင့်၊ ရွှေဗျာဒိတ်နှင်း၊  
ဝိဇည်းမင်းလျှင်၊ တည်ရင်းမဆွ၊ လက်ဦးစပေတဲ့၊ ကျွန်းများထွတ်  
စွန်၊ သည်ကိုလွန်ခဲ့၍၊ သံဝှန်ကြီး၊ တံဖိုးလှိုင်းယက်အလိပ်လိပ်။

3. ပျိုနှင့်ရကန်မည်ကဲ့သို့ခြားနားကြောင်း၊ ပဉ္စပါးရကန်နှင့်သုတ  
သောမပျိုမုညဒါဟရုဏ်များထုတ်နှုတ်၍ရှင်းလင်းဖော်ပြပါ။ 10

4. အောက်ပါအကြောင်းအရာတစ်ခုခုကိုစာတိုကုံးရေးသားပါ။ 20

(က) ကုန်ကူးသန်းရောင်းဝယ်ခြင်းအကြောင်း။

(ခ) လူတို့၏ယဉ်ကျေးရာယဉ်ကျေးကြောင်း။

(ဂ) စာစီစာကုံးပညာအကြောင်း။

5. Translate into Burmese :—

15

Evening lowered around Morton (name of village) as he advanced up the narrow dell which must have once been a wood, but was now a ravine divested of trees, unless where a few from their inaccessible situation on the edge of precipitous banks, or clinging among rocks and huge stones, defied the invasion of men and of cattle, like the scattered tribes of a conquered country, driven to take refuge in the barren strength of its mountains. These too, wasted and decayed, seemed rather to exist than to flourish, and only served to indicate what the landscape must once have been. The track of the road followed the course of a brook, which was now visible.

## KHASI VERNACULAR

*Paper-Setter*—MR. ROY ROWLAND THOMAS, M.A.

*Examiner*—RAI BAHADUR DOHORY ROPMAY, B.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passage into Khasi :—

15

In order to raise money, Charles asked for what was called benevolence, that is, a loan of money, which was never to be repaid. This was really a tax, and as Parliament had not agreed to it, whole counties refused to pay. When the king tried to raise the loan by force, there was great indignation among the people. The House of Commons refused to grant any supplies until the king agreed to rule according to the law. In anger he dissolved two Parliaments, and when want of money caused him to call another, the Commons were more determined than ever to resist him.

2. Compose sentences in Khasi illustrating the use of five of the following :—*Kyndang kuah, Ai reng, Khum ka jingit, Hynniew akum, Iakad-maw, Raken, Sakar.* 10

8. Write an essay in Khasi on one of the following :— 20  
 (a) College Discipline.  
 (b) Higher Education in the Hills.  
 (c) Description of any Khasi festival.
4. *Either*, Istuh ia ka Histori ka jingp i ki Syiem Lieh ha ka hims 15  
 Khadsawphra.  
*Or*, Jathuh bniash aiu phi tip shaphang U Major David Scott.
5. Explain in Khasi with reference to the context :— 15  
*Either*,  
 Kumba rwai iarykhie ka lang shugain niuhmoh.  
*Or*,  
 Ba ioh ki sin niang bulot khlem akor.
6. Give the context of the following with full explanatory notes :— 15  
*Either*,  
 Iu bamsap l'i pyrthei, iu duh sohkhau.  
*Or*,  
 Ha ka tyrut ka smer laiphew kynsha  
 Ba ka iing kam ieng d'la ka bok nylla.
7. Batai bha kumno u nonethoh iong phi u ong shaphang kaba 10  
 nehingmut ha 'Ki Jingmlien ha ka Kam.'

## NEPALI VERNACULAR

*Paper Setters*—{RAI SAHIB HARIPRASAD PRADHAN, M.A.  
 MR. BODHIKRAM ADHIKARI, M.A.

*Examiner*—MR. SURYA VIKRAM GEWALI, B.A., B.T.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Sketch the character of Abhimanyu and describe how he was pre- 16  
 maturely done to death by the cruel hand of fate.
2. What was the attitude of Sanjaya towards his enemy before Bidula 12  
 spoke to him, and what changes were wrought in his mind by her speech?
3. Describe some of the acts of treachery played by Duryodhana upon 12  
 the Pandavas.
4. (a) Explain and illustrate the following proverbs :—  
 (i) नाच न जान्दै न आगन टेढो ।  
 (ii) घरमा वस्त्रा जुझाको शास्ति शम्भामा वस्त्रा कुराको नास्ति ।

(b) Give the figurative meanings of the following and use them in sentences of your own :— 10

१. जिरिकी शाग खुआउनु ।
२. मामाको घर देखाउनु ।
३. हातमा वहि जमाउनु ।
४. अर्घ चन्द्र दिनु ।
५. सेतो घरमा जालु ।

5. Expand the idea contained in the following :—

10

यसो गरे देखि यती हुनेछ,  
यती भए दुर्लभ फेरि केछ,  
भनेर खाली धनको निमित्त,  
समस्त संसार छयो प्रवृत्त ।

6. Translate the following into Nepali :—

15

And for hours they walked on under the cool trees. They retained their reserved attitude towards each other and scarcely exchanged a word, though they never left each other's side, but went through the darkest greenery of the forest. At first their way lay through a jungle of saplings with trunks no thicker than a child's wrist. They had to push them aside, and open a path for themselves through the tender shoots which threw a heavy lacework of foliage before their eyes. The saplings closed up again behind them, leaving no trace of their passage, and they struggled on and on at random, ignorant of where they might be, and leaving nothing behind them to mark their progress, save a momentary waving of shaken boughs.

7. Write an essay in Nepali on any one of the following subjects :—

20

- (a) The value of science as evidenced by present-day comforts.
- (b) Your idea of an ideal life.
- (c) The value of sports in the constitution of character.
- (d) Man is the architect of his own fate.
- (e) Town life versus country life.

## TELUGU VERNACULAR

Paper-Setters— $\left\{ \begin{array}{l} \text{DR. B. RAMACHANDRA RAU, M.A., PH.D.} \\ \text{PROF. SIR S. RADHAKRISHNAN, KT., M.A.,} \\ \text{D.LITT.} \end{array} \right.$

Examiner—DR. B. RAMACHANDRA RAU, M.A., PH.D.

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

1. Translate the following passage into idiomatic Telugu :—

20

This change in the constitution of the intellectual class that is taking place under the influence of science, and is required by the application of science to human life, is accompanied also by a change



in the status of the intellectuals. You will remember that when Plato pictured his Utopia of the most desirable society, on the top was the philosopher, the thinker, the man of knowledge, and he was the ruler. Underneath him were the fighters, the tradesmen, and the craftsmen. The same thing is true of the Hindu caste system. The thinker was at the top, a leader and ruler. Now what has happened since then? Under the development of western nations the fighter has pushed the thinker to one side, and we have a period of domination of the people by the fighting tribes who formed the nations and the empires.

2. ప్రస్తుతము ఆంధ్ర దేశమున ప్రజ్వలించుచుండు ప్రశ్నలనే కములను మీ గ్రంథకర్త గోపాలరావుగారు స్పృశించి యున్నారు. కొన్ని పేర్కొని వారినెట్లు విమర్శించిరో వ్రాయుడు.

3. గయని, శ్రీకృష్ణుని, అర్జునుని పూర్వపుత్తంతము విపులముగా వ్రాయుడు.

4. ఈ క్రింది పద్యముయొక్క భావము గ్రహించి మీ సంగత మాటలందు పొందుపరచి రెండు పేజీలు తక్కవలేకండా వ్యాసము వ్రాయుడు.

ఉండ దగనంచు, లేదంచు, నుండి లేదటంచు

లేనిదున్న దటంచు, నన్ని వెట్టి

పోకలను బోవు తలతిక్క బుద్ధి పురుష

లోకమున కున్న దే కాని మీకులేదు.

5. "భక్తి" వలన గలుగు లాభములను గురించి వ్యాసము వ్రాయుడు:—

"గురుభక్తి, పితృభక్తి, రాజభక్తి, దేశభక్తి, భాషాభక్తి యను హంసములను గురించి వ్యాసము వ్రాయుడు.

## GUJARATI VERNACULAR

Paper-Setter—PROF. I. J. S. TARAPOREWALA, B.A., PH.D.

Examiner—PANDIT HARGOVIND DAS SETH

*Candidates are required to give their answers in their own words as far as practicable**The figures in the margin indicate full marks*

૧. કરણ રાજાએ રૂપસુંદરીનું હરણ કરી કારણે કર્યું? એવાં ઘોર કર્મ 15  
ખાદિ એને ને કદા સહેવવાં પડ્યાં તે એને માટે પુરતી સભા ગણાય કે નહિ?  
તમને ને જવાબ આપો તેનાં કારણો જરા વિસ્તારીને લખો.

૨. “હલદી ઘાટ”નાં યુદ્ધનું વર્ણન કરો. એ કાવ્યમાં વીર રસ કેવી 15  
રીતે સમાય છે તે બરાબર સમજાવો.

૩. બાગલાણવા કીક્કાનું વર્ણન કરો. તમારાં પુસ્તકમાં એ કીક્કાનું 10  
વર્ણન કયા સંલેખોમાં કરવામાં આવ્યું છે.

અથવા

નર્મદા રાંડરનું કાવ્ય “જય જય ગરવી ગુજરાત” અને મલખારીનું કાવ્ય  
“ગુજરાતનું ભાવી ગૌરવ” એ બંને એકમેક સાથે સરખાવો. એમાંથી  
કવિઓનાં દેશભિમાન માટે વાંચનારને કેટું મત પેસે?

૪. “પુસ્તકની સખિતમાં ને અનંતાનંત લલ છે, તહેમના ચરણનો આશ્રય 15  
કરવાથી ને અચ્ચ એટલે ઉત્તમોત્તમ અને અમોઘ એટલે સિદ્ધ જ્ઞાન, વિવેક  
અને ચાતુર્ય પદોધાય છે તે બધુંતો એક બાબુએ રહ્યું; પણ બીજા સહવાસો  
કરતાં પુસ્તકોને અમથા ઉથલાવી જવા નેતલો પણ પુસ્તકોને સહવાસ  
લાભકારી છે. બે અક્ષર આવડે તો નેપડયા જડે, પણ ઉલટું નકારા  
નિચારમાંથી કે નકારી સોખતમાંથી ઉગરાય એ મહા લાભ છે. સમય  
નકામો કે ભારે લાગે નહિ, અને ગમત સાથે જ્ઞાનનો લાભ થાય.”

ઉપલાંનો સારારાં ટુંકમાં લખો, પુસ્તકોથી થતા કેટલા લાભો ઉપલાંમાંથી  
તમો ગણાવી શકો છો? “બે અક્ષર આવડે તો તે પડમા જડે” એટલેથી તે  
બરાબર સમજાવો.

૫. નીચેનાં છાન્દસોમાં અનુવાદ કરો:—

15

Many families in China live perpetually in moving homes upon the crowded rivers. These house-boats are called *sampan*s, and

they are about twenty feet in length and within them lives an entire family—grand-parents, parents, and children. These boats are curious structures. They look rather like long barrels. But despite their crowded quarters the Chinese seem to enjoy this sort of life on the rivers in their rolling homes.

೨೬. ಕೆಳಗೆ ನೀಡಲಾಗಿರುವ ಕಥೆಯನ್ನು ಓದಿ ಮತ್ತು ೨೫ ರಲ್ಲಿ ಸಮಗ್ರವಾಗಿ :-

10

- (ಕ) ಅಧಿಕಾರಿ ಸಾತೆ ಬಹು ಹಾಳಾ,
- (ಖ) ಸುಖಾಶುಭಂ ಬಹು ಆವಣಿಪ್ರಾಪ್ತಂ,
- (ಗ) ಹೊಡೆ ನಿರಾಪರಾಧಿ ನೆ ವಡೆಪ್ಪಾಂ ಬಟ್ಟಾಂ,
- (ಘ) ಲೇನೇ ಸಾಹು ಸಾಹು ತೇನೇ ಹೊಡೆ ನ ಬಾಪ್ಪ,
- (ಙ) ಅಂಥಾ ಸುಖಾ ಬಾಪ್ಪನಿ.

೨೭. ನೀಡಲಾಗಿರುವ ಕೆಳಗೆ ವಿಷಯ ೫ ರಲ್ಲಿ ನಿರ್ದಿಷ್ಟ ಲೇಖನ :-

20

- (ಕ) ನಿರಾಪರಾಧಿ ಸುಖಾ ಸಾಹು ಹೆ ಹೊಡೆಪ್ಪಂ,
- (ಖ) ನದೀಪ್ರಾಪ್ತಂ ಬಹುಪ್ರಾ,
- (ಗ) ಸಂಸಂಗ.

## KANARESE VERNACULAR

*Paper-Setter and Examiner—MR. P. APPAJI RAO, B.Sc.*

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay in Kanarese on any one of the following subjects :— 20

(a) The purda-system : probabilities of its origin and growth in India—its present form and scope—its extent—its effect on women and the present and future generations—should it exist or not?

(b) Dramatic literature.

(c) Am I not free to do as I choose?

(d) ಕುಲವನ್ನು ನಾಲಿಗೆ ಹೇಳುವುದು.

2. Translate into Kanarese the following :— 15  
 Remember me when I am gone away,  
 Gone far away into the silent land;  
 When you can no more hold me by the hand,  
 Nor I half turn to go, yet turning stay.  
 Remember me when no more day by day  
 You tell me of your future that you planned :  
 Only remember me; you understand  
 It will be late to counsel then or pray.  
 Yet if you should forget me for a while  
 And afterwards remember, do not grieve;  
 For if the darkness and corruption leave  
 A vestige of the thoughts that once I had,  
 Better by far you should forget and smile  
 Than that you should remember and be sad.
3. Amplify (in Kanarese only) the idea contained in the following :— 8

(ಅ) ಕೆಲವರಿಗೆ ಕೂದಲು ಯಾವುದು, ರೋಮವು ಯಾವುದು?

(ಆ) ನನ್ನ ಬಿದ್ದರೂ ಭ್ರಷ್ಟ ನಾಗ ಬಾಕದು.

4. Give the substance (in Kanarese) of the story of 15  
 ಹಿಂದಿ.
5. Explain with reference to the context :— 15  
 ಈತಂಗೆ ಸಜಿವಂ ಸುಬುದ್ಧಿ ಯೆಂಬವ ನೊರೈ |  
 ನಾತನೆ ಪಾಲಿಸುವ ನಿನನ ಭೂತಕಮಂ ನಿ |  
 ಜಾತಿಶಯ ಧರ್ಮದಿಂದೆಳ್ಳನಿತು ದೋಷಮಿಲ್ಲದೆ ಸಾವಧಾನನಾಗಿ ||  
 ನೀತಿವಧಮಂ ಬಿಡದೆ ವಿವಿಧ ವರ್ಣಾಶ್ರಮದ |  
 ಜಾತಿ ಭೇದವ ನರಿದು ಸಂತತಂ ಪ್ರಜೆಗಳಂ |  
 ಪ್ರೀತಿಯಿಂ ಪೊರೆದು ಪರಿಚನಕೆ ವದುಳಿಗನಾಗಿ ಭೂವನಂ ಪೋಷಿ  
 ಸುವನು.
6. What is your estimate of Vikramorvasiya Nāṭaka? Explain 10  
 fully in Kanarese.
7. Write a letter in Kanarese to your friend explaining the steps 12  
 taken to improve the industrial and economic development of your  
 town.
8. Write short sentences illustrating the use of the following :— 5  
 (a) ಕುಲಕರ್ಣಿ, (b) ಲಜಾಯ್ತು, (c) ಮಹಿಪಾಲ, (d) ಮುದದಿಂ,  
 (e) ಬಯಲಾಗಿ, (f) ನೆಗಣ್ಣ.

## MODERN ARMENIAN VERNACULAR

*Paper-Setter*—MR. ZEBEDEE HANANIAN*Examiner*—MR. ZEBEDEE HANANIAN*Candidates are required to give their answers in their own words as far as practicable**The figures in the margin indicate full marks*

1. Translate into English :—

15

Ուրբան ունիս դու ալի  
 Ղ'ակատս ացնքան խոկ ունի.  
 Ուրբան ունիս դու փըրփուր.  
 Սիրտս այնքան խոց ունի բիւր :

Եւլ եթէ գողդ ալ թափին  
 Եւլքն աստեղաց երկընքին.  
 'Նըմանիլ չես կըրնար դուն  
 Հոգւդս որ է բոց անհուն :

Հոտ աստղերը չեն մեռնիր.  
 'Նաղիկներն հոգ չեն թողնիր.  
 Եմպերըն չեն թըրջեր հոգ.  
 Երբ խաղալ էք գութագու և օդ :

Իճակ դու ևս թագուհիս.  
 Զի թ հովէ մ ալ խորշումիս.  
 Վարձեալ խօրքիդ մէջ խրոտջ  
 Տիս կըպահես դողաղալով :

2. Translate into Modern Armenian :—

15

When all around grew drear and dark,  
 And reason half withheld her ray.  
 And hope but shed a dying spark  
 Which more misled my lonely way.

In that deep midnight of the mind  
 And that internal strife of heart,  
 When dreading to be deem'd too kind  
 The weak despair—the cold depart.

When fortune changed and love fled far,  
 And hatred's shafts flew thick and fast,  
 Then wert the solitary star  
 Which rose and set not to the last.

Oh! blest be thine unbroken light  
That watch'd me as a seraph's eye,  
And stood between me and the night,  
For ever shining sweetly nigh.

And when the cloud upon us came,  
Which strove to blacken o'er thy ray—  
Then purer spread its gentle flame,  
And dash'd the darkness all away.

Still may thy spirit dwell on mine,  
And teach it what to brave or brook—  
There's more in one soft word of thine  
Than in the world's defied rebuke.

8. Write in prose on the following subject in Eastern Armenian :— 10

Եւս դիշեր է. սենեակիս մէջ միայնակ  
Կանթեղ չունիմ: ոչ ալ երկինքն ունի շող:  
Իր լոյսն յետին մարեց դարպասն ու տընակ:  
Եւ մընացի իմ խոհերուս հետ մաշող:

Կրթափառին շուրջս ըստւերներ թանճրահոծ  
Սերձենալով հեռանալով յամրաբար:  
Եւ կըլսեմ իրենց վայելն ողբակոծ ու մոլար:  
Տըխուր մըտքիս ուրւականներն են համակ:  
Քընորք հոգւոյս հազիւ հասած արթուներ:  
Եւ մինչ կանցնին օրերըս ցուրտ ու ցատաք  
Լ'նոնք կու տան ինձ ըսփոփանքն արցունքի:  
Օյ մինակ եմ հոս գէմքերու հետ տըրտում:  
Կոյսերու հետ օրոնք չունին իղձ ու խանդ:  
Որոնց ձայնին վանկերն աղօթք անապատում  
Կըխորտափեն երազս ու յոյս մանաւանդ:

4. Answer in Modern Armenian :—

20

(a) (i) Ով է Խորհեան Հայրիկն:

(ii) Ինչ գործ և գեր է ունեցել մեր ազգային կեանքում:

(b) (i) Լիլանի կեանքը ու երկերը:

(ii) Ինչ գեր է խաղացել մեր գրականութեան մէջ:

5. Answer in Modern Armenian :—

10

(a) Ինչո՞ւ հտարրերութիւնը Միջինին ու Միջինին  
բարբառի միջև : Հոլովի միջինին, երկու ծեղով էա :

(b) Որեւէ գոյական իւրաքանչիւր հոլովով ինչո՞ւ պաշտօն  
է առնում, մի նախադասութեան մէջերը փոխարինում է :

(c) ԳՆԻՆ, ԳՆԻՆ, բայերի սաչ. եղ. ներ. ժամ. ոչ  
ինչպէս կը խոնարհուի :

(d) Խոնարհի միջինը Միջինին բարբառով :

6. Write an essay in Modern Armenian on one of the following subjects :— 30

(a) Հայ հանրապետութիւն :

(b) Հայ գաղութային կ'անքից :

(c) Միջինին նկարագրի և գաղութային կ'անքի կարեւոր  
բովանդակութեան մասին :

## MODERN TIBETAN VERNACULAR

Paper-Setter—DR. SATKARI MUKHERJEE, M.A., PH.D.

Examiner—MR. KARMA SANDON PAUL

*Candidates are required to give their answers in their own words as far as practicable**The figures in the margin indicate full marks*

1. Translate the following extracts into English :—

40

(a) དྲི་ཆའི་ཀྱལ་བོ་ཁྱད་པར་ཅན་ཞིག་ཏུ་སྐྱུལ་ནས་བེ་རྩུ་རྩའི་དབྱུག་པ་ཅན་གྱིས་

མང་ལྷག་པར་འབྱུར་བས་རབ་དགའ་གྱིས་མང་ཡོངས་སུ་ཆོད་ནས་དཔའ་ལྷུ་ཞིང་ཁོངས་  
 རྩལ་འཛོམས་པར་ཆོས་བསྟན་ནས་རྒྱན་བཞུགས་ཀྱི་འབྲས་བུ་ཐོབ། རི་ནས་ཀྱུ་ཤི་གོང་ཏུ་  
 མཐའ་མདུན་གཞིས་མལ་ཏུ་གཞིས་ས་པས། ཡུ་རྩམ་ཁྲ་རའི་མེ་དོག་ནམས་རྫིང་ཤིང་གསལ་པ་  
 མཐོང་ནས། རབ་བཟང་སྟོང་མ་བདེ་བར། བདག་གི་བསོད་ནམས་ཉམས་སམ་སྐྱུ་མ་པར། ཆལ་  
 གི་རྩ་མོས་སྐྱུ་པ། རབ་བཟང་ཁྱོད་སྐྱུག་བསྐལ་མ་བྱེད། ཡུ་རྩམ་ཁྲ་རའི་མེ་དོག་འདི་ནི་  
 ཁྱོད་ཀྱི་བསོད་ནམས་ཀྱི་མཐུ་ས་ཡིན། འདི་ཀྱལ་བ་སྐྱུ་བ་ཉམས་པའི་རྩལ་སྤྲུའམ།

(b) ལེགས་རྒྱས་ཞིང་ལ་རབ་རྒྱང་གང་བདེ་བ་དང་།

བྱས་ཤེས་དགེ་ལ་ཐན་པ་གང་བྱས་དང་།

ཡོན་ཏན་དག་གིས་མཐོ་ལ་གང་བྱིན་པ།

ནི་ནི་ལོ་མང་སྟོང་ཐུག་འཕེལ་བར་འབྱུར་།

2. Explain the following passage in Tibetan and draw out the moral :— 10

ལྷ་ཀྱའི་ཀྱལ་བོ་མཁའ་ལོང་སྐྱུ་ཆོ་འདས་པས། བཅོམ་པ་ལྷ་འདས་ཡབ་ཀྱི་སྐྱུ་གཏུང་  
 ལ་མཆོད་པ་དང་། མཆོད་རྟེན་མཆོད་པས། རྟེན་སྟོང་ཐེ་ཆོས་ཏུ་གྱུར་ནས། ཀྱལ་བ་འཛིག་  
 རིན་གྱི་བྱ་བ་སྤྲུལ་ནས། འཛིག་རྟེན་དང་མཐུན་པའི་མཆོད་པ་འདི་འདྲ་ལ་མཆོན་ཅི་ལགས་  
 ལུས་པས། མཆོད་འོས་སྤྲུལ་པ་ལ་ས་ནི་སྐྱུ་མས་ཀྱང་མཆོད་པར་འོས་ཤིང་། བ་མ་མི་  
 མཆོད་པ་ནི་ཆོས་ཀྱང་ཁོག་ཆོས་ཡིན།

3. Give the substance of the following extract in Modern Tibetan :— 10

ཀྱལ་བྱས་བྱས་མེདི་ཆོག་ནི་ཐོས་པ་ཁང་། ཁ་ཆོད་བཟུ་ཕྱིར་ཆོག་གི་ལུ་སྐྱུ་  
 པ། རྟེན་སྟོང་ནམས་རྟེན་ཀྱལ་གཞན་བསམ་ཆི། མ་ཡི་བདག་བོ་འོངས་ཆོ་ཅིག་མི་རྣམ་།



4. (a) Write sentences illustrating the use of the following particles and quote the rules :— 8

both as conjunctive of individual words

and of whole sentences.

(b) Conjugate the following roots in all the tenses and the imperative mood :— 6

சூர்வ | சூர்வ | சூர்வ |

5. Write an essay on one of the following subjects :— 26

(a) Genius is capacity for taking infinite pains.

(b) Culture and civic virtues make a nation really great, and military power is only a necessary accident.

### TAMIL VERNACULAR

Paper-Setter and Examiner—MAHAMAHOPADHYAY VEDANTA-

VISARAD ANANTAKRISHNA SASTRI

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

1. அடியிற்கண்டச் சொற்களின் கருத்தும் அவற்றைப்பற்றிய அதிகாரங்களின் கோக்கமும்யாதென விளக்குக :—

Either,

(a) நடுவு நிலைமை.

(b) அழுக்காறுமை.

(c) சகை.

Or,

(a) ஒழுக்கமுடைமை.

(b) புறங்கூறுமை.

(c) பயனில்ச் சொல்லாமை.

2. கீழ்க்கண்ட குறள்களில் விரும்பிய இரண்டு குறள்களை பதவுரை தெளிவுரைகளுடன் விளக்கவும் :— 15

(a) பொறுத்தவிறப்பினை யென்றுமதனை,  
மறத்தலதினு நன்று.

(b) பயனில பல்லார் முற்சொல்லனயனில்  
காட்டார்கள் செய்தலிறீது.

(c) ஒன்றுவுலகத் துயர்ந்த புகழல்லாற்  
பொன்றாது நிற்பதொன்று.

(d) காலத்திரும்பெய்தான்மிசிறிதெனினு  
கூலத்தின் மாணப் பெரிது.

3. (அ) கைத்தாழில்.

20

(b) கல்வி இவற்றினொன்றை பியாட்டி ஓர் கீண்ட வியாஸம் எழுதுக.

4. இனியவை கூறுதலுக்குப்பின் “செய் கன்றியறிதலை” யும் அழககாழுமைக்குப்பின் வெஃ காமையையும் வைப்பதற்குக் காரணத்தை எழுதவும்.

10

5. அப்பரில் திருநாமங்களையும் அழகரின் காரணங்களையும் அவர் சமணர்களை வெல்லிய வரலாற்றையும் விளங்கச் செய்யவும்.

20

அல்லது.

திருநிலகண்டரின் சரிதையை விளக்கி ஞான ஸாம்பந்த முனி சமணர்களை வெல்லிய வரலாற்றை விளங்கச் செய்யவும்.

6. Translate into Tamil :—

20

In some parts of India which are infested by tigers, the natives adopt a curious plan to catch them. They prepare a sort of birdlime, which is wonderfully sticky, and spread it very thickly over broad leaves. Finding out the animal's haunt, they scatter a few hundreds of these smeared leaves about the place, and then retire to a safe distance. So certain are they of their game, that they begin to cut pegs with which to stretch out his skin; nor are they mistaken. The tiger, quite unsuspectingly, comes sauntering along to where the birdlime is scattered, and presently one of the big leaves sticks to his paw. Like all animals of the cat kind, he is very particular about his paws, and tries to shake off the leaf, but in vain. He next tries what good a whisk at the side of his head will do, and thereby gets his whiskers and eyes smeared with the treacly stuff.

## MALAYALAM VERNACULAR

*Paper-Setter and Examiner—MR. C. E. ABRAHAM, M.A., B.D.*

*Candidates are required to give their answers in their own words as far as practicable*

*\*The figures in the margin indicate full marks*

*Answer Questions 7 and 8 and any other THREE—FIVE questions in all*

1. ദേവമണി ഞാൻ അദ്ധ്യായത്തിൽ വിവരിച്ചിരിക്കുന്ന ഭിക്ഷു സംഘത്തിന്റെ ജീവിതരീതയും, അവരുടെ വാസസ്ഥലമായ മഠവും വർണ്ണിക്കുക.

2. ദേവമണിയിലെ പൂഡ ജ്ഞാതിക്കിയുടെ അഭിപ്രായങ്ങൾ വിസ്മരിച്ച് വിമർശിക്കുക. 18

3. “വിധിവിഹിതം ലംഘിക്കുക മനുക്യൻ ശത്രു മല്ല; അത്യാപത്തുകളേയും, മഹൈശ്വയ്യങ്ങളേയും മനുക്യൻ ഒരു പോലെ ഗണിക്കണം. അവനവൻ വിധിച്ചിട്ടുള്ള അദ്വൈതം അവനവൻ അനഭവിച്ചതന്നെ തീരണം.” 18

പ്രസ്തുതത്വങ്ങൾ ദേവമണി കഥയിൽ നിന്ന് ഉദാഹരിക്കുക.

4. ഗുണസുന്ദരിയുടെ ചരിത്രം ചുരുക്കി ഷെഴുതി, അവളുടെ സ്വഭാവ വിശേഷതകൾ വിശദീകരിക്കുക. 18

5. കർമ്മന്റെ പീയൂ പരാക്രമങ്ങൾ വർണ്ണിക്കുക. 18

6. മാളവികാഗ്നിമിത്രത്തിലെ കഥ ചുരുക്കി ഷെഴുതുക. 18

7. Write an essay not exceeding *three* pages on *one* of the following subjects :— 30

(a) കേരവൃക്ഷം (തെങ്ങ്).

(b) കേരളത്തിലെ അധഃകൃത ജാതികൾ.

(c) ദേശസഞ്ചാരം മൂലമുള്ള പ്രയോജനം.

(d) ഇസ്ലാമിലെ മഹാമാരിൽ ഒരാളുടെ ജീവചരിത്രം.

8. Translate into Malayalam :—

16

(a) A beautiful legend tells us that after his death his Muhammadan and Hindu disciples disputed the possession of his body; which the Muhammadans wished to bury, the Hindus to burn. As they argued together, Kabir appeared before them, and told them to lift the shroud and look at that which lay beneath. They did so, and found in the place of the corpse a heap of flowers; half of which were buried by the Muhammadans at Maghar, and half carried by the Hindus to the holy city of Benares to be burned—fitting conclusion to a life which had made fragrant the most beautiful doctrines of two great creeds.

(b) O servant, where dost thou seek Me?

Lo! I am beside thee.

I am neither in temple nor in mosque:

I am neither in Ka'ba nor in Kailash:

Neither am I in rites and ceremonies, nor in Yoga and renunciation.

If thou art a true seeker, thou shalt at once see Me: thou shalt meet Me in a moment of time.

Kabir says, 'O Sadhu! God is the breath of all breath.'

## PORTUGUESE VERNACULAR

*Paper-Setter & Examiner*—AGA MD. KAZIM SHIRAZI

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Give in Portuguese the meaning of the following verses :—

30

(1)

Se ve a força, o amor,  
Que lava na terra inteira,  
E faz sair uma flor  
De Dentro d'uma caveira.

(2)

Se lhe lembra a morte odiosa,  
Velha trapeira homicida,  
Que na costa tenebrosa  
Junta os farrapos da vida.

(3)

Se pergunta quem nos ares  
Poz a terra, esse mosquito,  
E faz jogos malabares  
Com astros pelo infinito.

2. Write a short essay in Portuguese on Junqueiro's poetry. Say what impresses you most in his style. 35
3. Write in Portuguese what you think of *Eurico* as a novel. 25
4. Render into Portuguese the following sentences :— 10
- (a) Go to Mr. Smith and tell him from me that I am expecting him.
  - (b) From whom do you come?
  - (c) Do not meddle with my affairs; attend to your own.
  - (d) It is covered with tiles.
  - (e) France extends from the Rhine to the Atlantic Ocean.
  - (f) I walk every day from twelve to three.

## ALTERNATIVE PAPER

Paper-Settlers—{REV. FATHER F. X. CROHAN, S.J.  
MR. HIRANKUMAR BANERJEE, M.A.

Examiner—REV. C. S. MILFORD, M.C., M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Either, Compare and contrast Tennyson and Browning as poets of art, illustrating your answer with reference to their poems. 15

Or, Summarize, EITHER *Love and Duty* or *The Last Ride Together* and show how its outlook on love is characteristic of the poet.

2. Explain briefly any two of the following extracts, noting allusions, if any :— 20

(a) This high man, with a great thing to pursue,  
Dies ere he knows it.  
That low man goes on adding one to one,  
His hundred's soon hit.

(b) Now lies the Earth all Danaë to the stars,  
And all thy heart lies open unto me.  
Now slides the silent meteor on, and leaves  
A shining furrow, as thy thoughts in me.

(c) Had you enjoined them on me, given me soul,  
We might have risen to Rafael, I and you  
Nay, love, you did give all I asked I think—  
More than I merit, yes, by many times

(d) As when we dwell upon a word we know  
Repeating, till the word we know so well  
Becomes a wonder and we know not why,  
So dwelt the father on her face.

3. Write notes on :— *Sir Lancelot, Camelot, Fra Lippo Lippi, My moon of poets, Pompilia, O God-like isolation which art mine* 15

4. *Either*, How does Rousseau describe his first impressions of Paris and what does he say about the French people ? 15

Or, Give an account of the character and person of Josiah Franklin as they are described by his son.

5. *Either*, What does Gibbon tell us in his *Autobiography* about the publication of the last three volumes of his *Decline and Fall* and the reception given to them on their first appearance? How does he defend his work against the adverse criticism of his contemporaries? 15

Or, What does Mill tell us about the impression that Wordsworth's miscellaneous poems made on him when he read them for the first time?

6. Explain any two of the following extracts :— 20

(a) He loved his country so well that he would not doubt my being his countryman, for fear he should not have so much occasion to speak of it.

(b) Our importance in society is less a positive than a relative weight: in London I was lost in the crowd: I ranked with the first families of Lausanne, and my style of prudent expense enabled me to maintain a fair balance of reciprocal civilities.

(c) The abbreviation of time and the failure of hope will always tinge with a browner shade the evening of life

(d) I was sentimental, snivelling, gaily morbidly religious. I hope and do believe I am a better man than I was a child. With my respects to Wordsworth.

(e) Much of parliamentary debate is dispute between men who in truth and at bottom agree, but invent arguments to disguise agreement and contrive a difference.

(f) Cobden and Palmerston were men of the high responsible world, and they were great men, perfectly aware of the force of the Medicean truth that States are not governed by paternosters.

## SANSKRIT

*Paper-Setters*— { DR. PRABHATKUMAR CHAKRABARTI, M.A., Ph.D.  
 „ NILMANI CHAKRABARTI, M.A.  
 MM. PROF. BHAGABATKUMAR SASTRI, M.A., Ph.D.

*Head Examiner*—MR. BANAMALI CHAKRABARTI, M.A.

*Examiners*— { MR. PHANIBHUSHAN CHATTERJEE, M.A.  
 „ SURENDRANATH BHATTACHARYYA, M.A.,  
 „ JYOTISHCHANDRA GHATAK, M.A.  
 „ ADITYAKUMAR BHATTACHARYYA, M.A.  
 „ GIRINDRANARAYAN MALLIK, M.A.  
 „ SIBADAS BANERJEE, M.A.  
 „ JATINDRANATH BHATTACHARYYA, M.A.  
 „ RAMSARAN GHOSH, M.A.  
 „ BHOLANATH CHATTERJEE, M.A.  
 „ HARIPADA SENGUPTA, M.A.  
 DR. SUDHENDUKUMAR DAS, M.A., Ph.D.  
 MR. AKSHAYKUMAR BHATTACHARYYA, M.A.  
 „ SADANANDA BHADURI, M.A.  
 „ BIPINBIHARI GUHA.  
 „ BHABABIBHUTI BHATTACHARYYA, M.A.  
 „ DINESCHANDRA BHATTACHARYYA, M.A.  
 „ ATULCHANDRA DASGUPTA, M.A.  
 „ BIMALNATH BHATTACHARYYA, M.A.  
 (To look over answer-papers written in Devanagiri character—)  
 MR. BASANTAKUMAR CHATTERJEE, M.A.  
 (To look over answer-papers written in Uriya character—)  
 „ MAHESWAR DAS, M.A.  
 (To look over answer-papers written in Telugu character—)  
 MM. VEDANTAVISARAD ANANTAKRISHNA SASTRI.  
 (To look over answer-papers written in Marathi character.—)  
 MM. PANDIT SITARAM SASTRI.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English one from Group A, one from Group B, and two from Group C :— 6 × 4 = 24

## GROUP A

- (a) शशम वृष्ट्याऽपि विना द्वाग्निरासीद्विशेषा फलपुष्पवृद्धिः ।  
 ऊनं न सत्येष्वधिको बबाधे तस्मिन् वनं गोसुरि गाहमाने ॥
- (b) अयैकधेनोरपराधवृत्त्याद् गुरोः कृशानुप्रतिमाद्विभेदि ।  
 शक्योऽस्य मन्युर्भवता विनेतुं गां कोटिः स्पृशंयता घटोष्ठीः ॥

## GROUP B

- (a) श्रेयो हि ज्ञानमभ्यासाज् ज्ञानाद् ध्यानं विशिष्यते ।  
ध्यानात् कर्मफलस्यागस्त्यागाच्छान्तिरनन्तरम् ॥
- (b) तुल्यनिन्दास्तुतिर्मौनी सन्तुष्टो येन केनचित् ।  
अनिकेतः स्थिरमतिर्भक्तिमान् मे प्रियो नरः ॥

## GROUP C

- (a) सितारविन्दप्रचयेषु लीनाः संसक्तफेनेषु च सैकतेषु ।  
कुन्दावदाताः कलहंसमालाः प्रतीयिरे श्रोत्रसुखैर्निनादैः ॥
- (b) क्षुद्राक्ष जक्षुर्हरिणान् मृगेन्द्रा विशश्वसे पक्षिगणैः समन्तात् ।  
ननम्यमानाः फलदिस्सयेव चकाशिरे तत्र लता विलोलाः ॥
- (c) उक्षाम् प्रचक्रुर्नगरस्य मार्गान् ध्वजान् बधन्धुर्मुमुचुः खड्गपान् ।  
दिशश्च पुष्पैश्चक्रुर्ध्विचिस्त्रैर्येषु राज्ञा निपुणा नियुक्ताः ॥
- (d) सूतोऽपि गङ्गासखिलैः पवित्वा सहाश्वमात्मानमनल्पमन्युः ।  
ससीतयो राघवयोर्धीयन् श्वसन् कटुष्णं पुरमाविवेश ॥

2. (a) Account for the case-endings in four of the underlined in the 2 × 4 = 8 following :—

- (i) सत्त्वेषु अधिकः । (ii) तस्मिन् गाहमाने ।  
(iii) ज्ञानात् विशिष्यते । (iv) निनादैः प्रतीयिरे ।  
(v) पक्षिगणैः विशश्वसे । (vi) राघवयोः अधीयन् ।

(b) Derive any three of the following :— 2 × 3 = 6

- (i) विशेषा । (ii) कोटिशः । (iii) अवदाताः ।  
(iv) ननम्यमानाः । (v) दिस्सया । (vi) चक्रुः ।  
(vii) जक्षुः ।

(c) Expound the samāsas in any four of the following :— 1 × 4 = 4

- (i) एकधेनोः । (ii) कृशानुप्रतिमात् ।  
(iii) घटोक्षीः । (iv) कुन्दावदाताः ।  
(v) मृगेन्द्राः । (vi) ससीतयोः ।  
(vii) कटुष्णम् ।

(d) Discuss the grammar in उक्षाम् प्रचक्रुः or दिशः पुष्पैः चक्रुः । 2

3. Either, Give in simple Sanskrit the main points in the account of Bharata's search for and interview with Rāma, as in *Bhāṭṭi*, Canto III. 6

Or, Describe the best method of devotion to God as in *Gītā*, chapter XII. (Answer either in English or in Sanskrit.)



Or, Explain in Sanskrit the allusions in :—

- (a) सेनान्यमालीय सिवासुराक्षः ।  
 (b) जडीकृतस्तम्बकवीक्षणेन वज्रं मुमुक्षुश्च वज्रपाणिः ।  
 (c) प्रजाः प्रजार्थव्रतकर्षिताः ..... नवोदयं नाथमिवौषधीनाम् ।

4. (a) Frame short sentences to illustrate any five of the following :— 5 × 3 = 15

- (i) Either, क्रम् without a prefix (उपसर्ग) in आत्मनेपद ।  
 Or, रम् with a prefix in परस्मैपद ।  
 (ii) Either, विंशति used in the plural number,  
 Or, सम used as a सर्वनाम ।  
 (iii) Either, अधि + इ(ङ्) in णिच् with the प्रयोज्यकर्तृपद ।  
 Or, लभ् + सन् in any conjugation.  
 (iv) Either, त्रि + लोक in समाहारद्विगु ।  
 Or, निर् + मक्षिका in the sense of मक्षिकाणामभावः ।  
 (v) Either, शी + a कृत्यप्रत्यय in the sense शेते अन्न ।  
 Or, सम् + चर् with a शीलार्थकृत्यप्रत्यय ।  
 (vi) Either, अर्थ + a तद्धितप्रत्यय in the sense अर्थादनपेतम् ।  
 Or, अप् + a तद्धितप्रत्यय in the sense अन्निर्व्याप्तम् ।  
 (vii) Either, A word derived from ख and चर् in the sense खे चरति या सा ।  
 Or, A word derived from ईश् in the sense ईष्टे या सा ।

(b) Correct any five of the following :—

5 × 2 = 10

- (i) मा रुदिहि बालक ।  
 (ii) वां धर्मं ब्रूहि ।  
 (iii) भगवान् विश्वानां जनानां पिता ।  
 (iv) विजय, विजय, पुस्तक ।  
 (v) ब्राह्मण आत्मनः स्वर्गाय यजसि ?  
 (vi) सम्राज्ञी कस्य न पूज्या ।  
 (vii) सिमुवनेषु को मे तुल्यः ?  
 (viii) लक्ष्मीमदिवं गृहम् ।

5. Translate into Sanskrit any five of the following :—

5 × 5 = 25

(a) Conquer your mind first; all the other senses will be conquered thereby.

(b) Happiness is to be sought for; but see that you do not make others unhappy.

- (c) Money is necessary no doubt; but money should be well-earned.  
 (d) Life is not positively miserable; only know how to live your life.  
 (e) Do not try to pry into other people's secrets; that is not gentlemanly.  
 (f) There are so many religions; they however lead to one destination.  
 (g) Happy the man and happy he alone;  
 Who can call to-day his own.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any three of the following extracts :— 5 × 3 = 15

(a) अथास्य ब्राह्मणो हस्तमगृह्णात्, अब्रवीच्चैनम् “जितक्रोधोऽसि, न ते किञ्चिदपरित्याज्यं ब्राह्मणार्थं” इति । ब्राह्मणोऽपि तं महाभागं समाजयत् । स हि पुत्रमपश्यदग्रे तिष्ठन्तं देवकुमारमिव पुण्यगन्धान्वित-मलङ्कृतम् ।

(b) अथ कपोतो राज्ञो दिव्यासनासीनस्योत्सङ्गं न्यपतत् । अथ पुरोहितो राजानमब्रवीत्, “प्राणरक्षार्थं इयेनाद् भीतो भवन्तं प्राणार्थं प्रपद्यते । अन्तवान् प्रार्थिवोऽस्य निष्कृतिं कुर्यात् । घोरं कपोतस्य निपातमाहुः ।”

(c) देवि, किमस्य क्रियतां दैवायस्ते वस्तुनि ? अतिमात्ममलं रुदितेन । न वयमनुग्राह्याः प्रायो देवतानाम् । आत्मज-परिष्वङ्गा-मृतास्वादसुखस्य नूनमभाजनमस्माकम् हृदयम् ।

(d) बुद्धिश्च निसर्गपटौ कलासु नृत्यगीतादिषु चित्तेषु च काव्य-विस्तरेषु प्राप्तविस्तारा तचेतरेभ्यः प्रतिविशिष्यते । तथाप्यसावप्रतिपाद्यात्म-संस्कारमर्थशास्त्रेषु, अनग्निसंशोधितेव हेमजातिर्नातिभाति बुद्धिः ।

(e) अहो वतायं हरिणकुणकः कृपण ईश्वरथचरणपरिभ्रमणरथेण स्वगणसुहृद्गन्धुभ्यः परिवर्जितः शरणं च मोपसादितः । नान्यं कञ्चन वेद मध्यतिविश्रब्धः ।

2. (a) Answer any two of the following :—

3 × 2 = 6

- (i) Do you find any grammatical discrepancy in the form समाजयत्, in Question 1 (a)? How do you derive and support it?

(ii) Account for the case-endings in **इयेनाद् भीतः** in Question 1(b) and **अलं हृदि तेन** in Question 1(c).

(iii) Can you change **काव्यविस्तरः** into **काव्यविस्तारः** in Question 1(d)? If not, why?

(iv) State the superstitious belief underlying the expression **घोरं कपोतस्य निपातमाहुः**.

(b) Either. Derive any three of the following :—

8

**आत्मजः । विश्रब्धः । पार्थिवः । पिपासा । आसीनः । सुहृत् ।**

Or, Name and expound the *samāsas* in **जितक्रोधः** and **दिव्यासनासीनः**.

3. Either, Explain in English or Sanskrit the particular aspect of Sibi's character which is illustrated by the statement—**स्यजे प्राणाद्यैव दद्यां कपोतम् ।**

6

Or, Give in simple English the substance of the following passage :—

**दिव्यं हि चक्षुर्भूतभवद्भविष्यत्सु व्यवहितविप्रकृष्टादिषु च विषयेषु शास्त्रं नामाप्रतिहतवृत्ति । तेन हीनः सतोरप्यायतविशालयोर्लोचनयोरन्ध्र एव जन्तुर्यदर्शनेष्वसामर्थ्यात् ।**

4. (a) Construct short sentences to illustrate any three of the following :—

$7\frac{1}{2} + 7\frac{1}{2} = 15$

(i) An intransitive verb with an object.

(ii) The comparative form of **गुरु** ।

(iii) **परवलिङ्गं द्वन्द्व-तत्पुरुषयोः ।**

(iv) **नित्यसमासः ।**

(v) **कृद्योगे कर्मणि षष्ठी ।**

(vi) The word **धर्म** as the last member of a *bahurrihi* compound.

(vii) The feminine forms of **आचार्य** ।

(b) Correct or justify any three of the following :—

(i) **शरदस्यागमे भवन्ति निर्मला दिशाः ।**

(ii) **पुण्यात् कर्मात् त्रिरमन्ते दुर्मतयः ।**

(iii) **चैत्रस्य दासभार्या ।**

(iv) **राजा प्रजानां शरणस्तेषां शासिता च ।**

(v) **तस्य प्रभृति सर्वस्यैव आनन्दं दृश्यते ।**

(vi) **नारायणाय नमस्करोति ददाति च तं पुण्याणि ।**

5. Translate into English any three of the following :—

$10 \times 3 = 30$

(a) **एतावति समये विद्याधर एकस्तं द्विजं शोकेन विलपन्त-  
मवलोक्ष्याम्रवीत्—द्विज ! यद्येषा न जीवति तदस्याः शोकेन तवापि जीवनं  
न स्यात्यति । अतः स्वीयमर्द्धाधुरस्यै स्वीकुरु । तदा विद्याप्रभावेन  
व्रजमेनां जीवयामः ।**

(b) कस्मिंश्चिदधिष्ठाने ब्रह्मदत्तनामा ब्राह्मणः प्रतिवसति । स च प्रयोजनवशाद् ग्रामे प्रस्थितः स्वमात्माभिहितः—यद्वत्स ! कथमेकाकी व्रजसि ? तदन्विष्यतां कश्चिद् द्वितीयः सहायः । स आह—अम्ब ! मा भैषीः, निरूपद्रवोऽयं मार्गः ।

(c) यद्यपि मया सेवकेन श्रीमद्देवपादानां न किमपि प्रयोजनमस्ति, तथापि प्राप्तकालेऽनुजीविना सास्त्रिध्यमवश्यं कर्त्तव्यमित्यागतोऽसि । यद्यपि स्वामिना चिरावधीरितस्य मे बुद्धिविनाशः शङ्क्यते, तदपि न ।

(d) धनेन किं यो न ददाति नाभुते ?  
बलेन किं यश्च रिपून् न बाधते ?  
श्रुतेन किं यो न च धर्ममाचरेत् ?  
किमात्मना यो न जितेन्द्रियो भवेत् ?

6. Translate into Sanskrit any four of the following :—

4 × 6½ = 25

(a) King Vikramāditya was a great patron of learning and of poetry. Ujjain during his reign was the most brilliant capital in the world.

(b) Among the eminent men gathered there, nine were particularly distinguished, and these nine are known as the 'nine gems.'

(c) Any poor student, who works hard, may become great and famous. How patience and industry overcome all difficulties is seen by the life of the eminent man.

(d) The five princes, two sons of Mādri, three sons of Kuntī, felt a deep thirst, but nowhere could they see water.

(e) Great was his grief when he saw the four dead men, and he glanced all around to see who it was that had killed them.

(f) There is a great deal of advising, and very little faithful performing; and talk that does not end in any kind of action is better suppressed altogether.

## PAL I

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## FIRST PAPER

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

1. *Either*, Give an account of the life of Buddhaghosa and his works. 1½  
*Or*, Summarize the story of the conquest of Ceylon.

2. Translate into English any *three* of the following passages : — 15
- (a) Atthi siddhā tato viriyam paññā ca mma vijjati,  
evaṃ me pahitattaṃ pi kiṃ jīvaṃ anupucchasi.  
Nadinaṃ api sotāni ayaṃ vāto risosaye.  
kiṃ ca me pahitattassa lohitani n'upasussaye.
- (b) Attavetanabhato 'ham asmi puttā ca me samāniyā aroṇā,  
tesuṃ na supāmi kiñci pāpaṃ atha ce patthayasī pavassa deva.  
Nāhaṃ bhātako 'smi kassaci nibbhiṭṭhena carāmi sabbaloke,  
attho bhātiyā na vijjati atha ce patthayasī pavassa deva.
- (c) Udakari hi nayanti nettikā usukārā namayanti tejanāṃ,  
dāruṃ namayanti taccakā attānaṃ damayanti paṇḍitā.  
Selo yatthā ekagghano vātena ca samirati  
evaṃ nindāpasaniṣāsu na samāhanti paṇḍitā.
- (d) Manuṣṣa pamattacārino taṇhā vaddhati māluvaṃ viya  
so palavatī hurāhuraṃ phulam iccham va vanuṃmi vānaro.  
Yam esā sahati janmī taṇhā loke visattikā  
sokā tassa pavaḍḍhanti abhivaḍḍharo va biraṇaṃ
3. Explain *one* of the following stanzas : — 9
- (a) Suttam geyyam veyyakaraṇaṃ gāthudānaitivuttakarā  
jāt ikabbhuta vedallaṃ navaṅgāṃ satthusaṇaṃ.
- (b) Na tena bhikkhu bhavati yāvā tā bhikkhate paro,  
vissaṃ dhammaṃ samādāya bhikkhu hoti na tāvatā.
4. Reproduce in Pāli (in *ten* lines) the conversation bet ween Buddha 10  
and Māra.
5. Write explanatory notes on any *three* of the following :—(a) *Ariya-* 9  
*ttṭhaṅgiko maggo*, (b) *Cattāri ariyasaccāni*, (c) *Sabbe saṅkhārā aniccā*,  
(d) *Chalābhīṇā*, (e) *Upadhī hi narassa socanā*.
6. (a) Expound the *samāsas* in any *four* of the following :—(i) *ritiṇṇa-* 4  
*paralokassa*, (ii) *vyādhimaraṇatunnānaṃ*, (iii) *paṇsukūladharaṃ*, (iv) *nad-*  
*dhapañcāyudho*, (v) *sabbābharaṇabhūto*, (vi) *sambuddhamatakovidāṃ*.
- (b) Give the derivation of any *four* of the words italicized in the stanzas 4  
in Question 2.
7. (a) Decline in all the cases and numbers EITHER *saddhā* OR *nadi*, 6  
and EITHER *bhikkhu* OR *dāru*.
- (b) Conjugate any *two* of the following roots :—*ji* (to conquer) in 6  
aorist, *su* (to hear) in future, *bhuj* (to eat) in imperative, *pā* (to drink) in  
aorist.
8. Translate into Pāli any *two* of the following extracts :— 25
- (a) Once on a time Brāhmadatta was reigning in Benares in Kasi.  
The Bodhisattva, having come to birth in those days as the king's son, was  
named Mahiṃsāsa. By the time he could run about, a second son was  
born to the king, and the name given to this child was Prince Moon; but  
by the time he could run about, the Bodhisattva's mother died.
- (b) The Bodhisattva was once born as a wealthy northern Brahman.  
Realizing the evils of lust and the blessings of the life of a recluse, he  
retired from the world and become a hermit. He had a large number of  
followers. Once when the rains set in, he travelled on an alms-pilgrimage  
with his followers and came to the town of Benares.
- (c) Now when the fishes caught sight of him, they said, "Of what  
are you thinking, my lord, as you sit there?" "I am thinking about you,"  
was the reply. "And what is your lordship thinking about us?" "The  
water in this pool being low, food scarce, and the heat intense,—I was  
wondering to myself, as I sat here, what in the world you fishes would  
do."

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following extracts :—

25

(a) Tada pana Bārāṇasirañño mattavāraṇe abhimukhaṃ agācchante *anivattanadhammā*, usaniyā 'pi sise patantiyā *asantasanasabhārā*. Sīlava-mahārājassa ruciyaṃ sati sakala-Jambudīpe rajjaṃ gaheṭum samatthā, sabaṣṣamattā *abhejjavarasūramahāyodhā* honti Te "kosalarāja āgaccha-ti" 'ti sutvā rājānaṃ upasaṃkamitvā "deva, kosalarāja kira 'Bārāṇasi-rajjaṃ gaṇhiessāmi' 'ti āgacchati, gaṇhāma naṃ amhākaṃ rajjaṣiṃmaṃ anokkantamattam eva pothetvā gaṇhāmā 'ti vadiṃsu.

(b) Bodhisatto pabujjhivā sayanapīṭṭhe pallamkena nisiṇṇo addasa tā itthiyo turiyubhaṇḍāni avattharivā niddāyanti, ekaccā paggharitakheḷā *lālākūḷinnagattā*, ekaccā dante khādantiyo, ekaccā kākacchantyo, ekaccā vippalapantiyo, ekaccā *vaṭṭamukhā*, ekaccā *upagatavattā* pākāṭabībhac-chasambādhaṭṭhānā. So tasmaṃ taṃ vippakāraṃ disvā lhiyyosomattāya kāmesu viratto bhosi. Tassa alamkatapaṭiyattam *Sakkabharanasadisom* pi taṃ mahātalaṃ *vippaviddhanānākuṇapabharitam* āmakasīsēnaṃ viya upaṭṭhāsi.

(c) Nāhu assāsapassāso *ṭhitacittassa* tādino |  
anejo santim ūrabbha yaṃ kālaṃ akarī munī ||  
Asallīnena cittaṇa vedanaṃ ajjhavāsaya |  
pajjotass'eva nibbānaṃ vimokkho cetaso ahū 'ti ||

2. (a) Expound the *samāsas* in any four of the italicized words in Question 1.

4

(b) Decline in the *instrumental* case the bases of any four of the following :—(i) *sise*, (ii) *rājānaṃ*, (iii) *amhākaṃ*, (iv) *ekaccā*, (v) *santiṃ*, (vi) *vedanaṃ*, and (vii) *cetaso*.

4

(c) Conjugate the roots of any two of the following :—(i) *gaheṭum* in aorist, (ii) *pothetvā* in future, (iii) *upaṭṭhāsi* in imperative, and (iv) *akarī* in optative.

4

3. Either, What do you understand by the term *Jātaka*? Mention the different parts of a *Jātaka* and explain their characteristic features.

8

Or, Describe briefly the "chain of causation" (*Paṭiccasamuppāda*) as expounded by the Buddha.

4. (a) Illustrate the uses of EITHER the *genitive* OR the *locative case* in Pāli.

5

(b) State the rules for the formation of EITHER the *infinitive* OR the *gerund* in Pāli, and illustrate your answer by examples.

(c) Show how the *desiderative* verbs are formed in Pāli, and give examples.

4

5. Write notes on any four of the following :—(a) *Majjhimaṭṭhapadā*, (b) *Pāramī*, (c) *Brahmadāṇḍa*, (d) *Disākāka*, (e) *Niyyāmakasutta*, and (f) *Sūkaramaddava*.

12

6. Render into English one of the following extracts :—

30

(a) Tasmīṃ kira kāle bahū sandhicchedaka-panthaghatāka-manu-saghatācacore manussā ānetvā kosalarāṇiṇi dassesum. Te rājā rajjuban-dhana-saṃkhalikabandhanehi bandhāpesi. Timsamattā ānapadā bhikkhū Satthārāṃ daṭṭhukāma āgantvā disvā vanditvā punadvase piṇḍāya carantā bandhanāgārāṃ gaṭtvā te cove disvā piṇḍapāṭapaṭikkantā sāyaṇhasamaye Tathāgataṃ upasaṃkamitvā "Bhante, aṃhaṃ amhehi piṇḍāya carantehi

bandhanāgāre bahū corā rajjubandhanāditi baddhā mal'ādukkhaṃ anu-  
bhavanta diṭṭhā.

- (b) Abhikkantena vappena yā tvaṃ tiṭṭhasi devate |  
Obhāsentī disā sabbā osadhī viya tārakā || (1)  
Kena te tādiso vappo kena te idha m-jj'hati |  
Uppajjanti ca te bhogā ye keci manasa piyā || (2)  
Pucchāmi taṃ devī mahānubh'āve |  
Manussabhūtā kiṃ akāsi puññaṃ ||  
Kenāsi evaṃ jalitānubhāvā |  
Vappo ca te sabbadissā pabbhāsati 'ti || (3)  
Sā devatā attamaṇā Moggallānena pucchitā |  
Pañhaṃ puṭṭhā viyākāsi yassa kammassa' idam phalaṃ || (4)  
Ahaṃ manussesu manussabhūtā |  
Purimāya jātīyā manussaloke ||  
Addasaṃ virajāṃ Buddhāṃ |  
Vippasannaṃ anāvilaṃ || (5)

## ARABIC

### FIRST PAPER

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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following :-

25

A

و اذكر في الكتاب ابراهيم - انه كان صديقا نبيا - اذ قال لاييه  
يَا بَت لِمَ تَعْبُدُ مَا لَا يَسْمَعُ وَلَا يُبْصِرُ وَلَا يُغْنِي عَنْكَ شَيْئًا -  
يَا بَت اِنِّى قَدْ جَاءَنِي مِنَ الْعِلْمِ مَا لَمْ يَأْتِكَ فَاتَّبِعْنِي اِهْدِكَ  
صِرَاطًا سَوِيًّا - يَا بَت لَا تَعْبُدِ الشَّيْطَانَ اِنَّ الشَّيْطَانَ كَانَ لِلرَّحْمَنِ  
عَصِيًّا - يَا بَت اِنِّى اَخَافُ اَنْ يَمْسَكَ عَذَابٌ مِنَ الرَّحْمَنِ فَتَكُونَ  
لِلشَّيْطَانِ رَلِيًّا - قَالَ ارَاغِبْ اَنْتَ عَنْ آلِهَتِي يَا اِبْرَاهِيمَ - لَنْ لَمْ  
تَنْتَه لَارْجَمُكَ وَاهْجُرْنِي مَلِيًّا - قَالَ سَلِّمْ عَلَيَّكَ - سَأَسْتَغْفِرُكَ  
وَبِىْ اِنَّهُ كَانَ بى حَفِيًّا \*

## B

فقال ابو ذر والله يا امير المؤمنين لقد ضمنت هذا الغلام ولم اعرفه من اى قوم - ولا رأيت قبل ذلك اليوم و لكنه نظر الى من حضر فقصدنى و قال هذا يضمننى فلم استحسن رده - و ابيت المروة ان يخيب قصده اذ ليس فى اجابة القصد من باس كيلا يقال ذهب الفضل من الناس - فقال الشابان عند ذلك يا امير المؤمنين قد وهبنا لهذا الغلام دم ابينا كيلا يقال ذهب المعروف من الناس فاستبشر الامام بالعفو عن الغلام و عجب من صدقه و وفائه - و استحسن مروة ابى ذر دون جلسائه \*

## C

و كان الملوك و الخلفاء يستعملون هذ الخصلة كثيرا فلا يسرعون الى قتل رجل معروف مشهور خوفا ان يحتاجوا اليه بعد ذلك فيتعذر عليهم بل كانوا يحبسونهم غوامض دورهم و يقيمون له كل ما يحتاج اليه من الطعمة شهية و فواكه و اشربة و ثلج و يحملون اليه كتباً يلهرو بها و يقطعون خبره عن الناس حتى يلبت فى نفوس اهله و اصحابه انه قد هلك ثم يستصفى امواله و اموال اصحابه و يستخرج ذخائره و ردائعه و يصير فى اعداد الموتى فلا يزال كذلك حتى تدعوهم الحاجة اليه فيخرجونه مكروماً و قد تادب و تهذب \*

2. (a) Re-write any one of the passages in Question 1 with full vowel-points. 6

(b) Write grammatical notes on the words underlined in extract C. 4

3. Answer any three of the following:— 12

(a) Use اسم فاعل and امر حاضر بشر and قتل from مفاعلة and تفعيل - باب نصر ينصر .

(b) What is مبنى ? Define it with an example. What is the term which is opposed to it?



- (c) How is a **مَنَادِي** governed? Explain with examples.
- (d) Give the **إثالة** and **عد** - **قيل** - **مخوف** of **تعليق**.
- (e) What are the rules for forming plurals in Arabic both for masculine and for feminine genders? Classify them and give examples of each.
4. (a) Write the story of the charity of **معن بن زائدة** in your own Arabic. 6
- (b) Write short notes on any two of the following :— 6
- (i) The story of the old lion, the fox, and the ass.
- (ii) 'Abdullāh, son of 'Abbās.
- (iii) Abul Qisām Aṭ-Tamḡūrī (الطنبروري)
5. Correct the errors in the following :— 6
- رايت ولدان يلعبون الكعبة فى ساحة فسقط اهديهما  
على الارض ففسر قدمه و جعلت يبكى فرائه شيخم ويرفعها  
من الارض و جاء بماء ودفعه ليشرب فانه عاطش \*
6. Enumerate both the **نواصب الاسم** and the **نواصب الفعل** with 10  
examples.
7. Translate into Arabic :— 25
- My brother's name is 'Abdu-'Aziz. He lived in Delhi for full sixteen years, and received his Arabic education there. When he returned to his native village in Bengal suddenly one night, his own people could not even recognize him. He is a great scholar in our part of the country and highly respected by the people for his self-denial, piety and vast erudition.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English either A or B :— 15

A

نبي انا بعد ياس و فتره

من الرسل و الارثان فى الارض تعبد

فامسى سراجا مستنيرا و هاديا

يلوح كما لاح الصقيل المهند .

و انذر نارا بشر جنّة  
 و علمنا الاسلام فالله نعمد  
 وانت اله الخلق ربّي وخالقي  
 بذلك ما عمرت في الناس اشهد  
 تعاليت ربّ الناس عن قول من دعا  
 سواك الهّا انت اعلى و امجد  
 لك الخلق و النعماء و الامر كله  
 فايان نستهدى و اياك نعبد

B

رفوا يوم بدر للرسول و فرقهم  
 ظلال المنا و السوف اللوامع  
 دعا فاجابوه بحق و كلمهم  
 مطيع له في كل امر و سامع  
 فما بدلوا حتى توافوا جماعة  
 و لا يقطع الآجال الا المصارع  
 لانهم يرجون منه شفاعة  
 اذا لم يكن الا الغبيون شافع  
 و ذلك يا خير العباد بلاؤنا  
 و مشهدنا في الله ولمرت تابع  
 لنا القدم الاولى اليك و خلفنا  
 لاولنا في طاعة الله نافع

2. Answer any three of the following :—

15

(a) State in what points concord is necessary between الصفة  
 and الموصوف .

(b) Name افعال القلب and state why they are so called.

(c) Give the different uses of إِنَّ and اِنَّ with examples.

(d) Mention the اسباب منع صرف , with their examples.

3. Write notes on the following :—

10

عبد الله ابن عباس - بزرجمهر - اسمعيل ساماني ديشليم -  
كتاب الفخرى -

4. Translate into English either A or B :—

25

A

كانَ محمدٌ نائمًا في فراشه و الساعةُ عشرٌ و الليلُ كَلَمَ  
ظلام و برد و الدنيا ساكنةٌ ليسَ فيها إلا صوتُ الخفيرِ في  
الشارعِ ثم سمعَ محمدٌ صراخًا في الخارجِ فقامَ من فراشه  
و فتحَ الشباك و اطلَّ منه فرأى حريقًا في بيتٍ جاره  
و هو بيتُ صاحبه ابراهيمَ الذي يلعبُ معه كلَّ يومٍ فنزلَ  
يجري لينظره فما وجدَهُ فدخلَ البيتَ في رُسطِ النارِ و رُسلَ  
الى غُرفةِ ابراهيمَ و ناداهُ فقامَ ابراهيمَ مرعوبًا \*

B

فأعجبَ الرَّجُلُ بِذَلِكَ الشابِّ الكريمِ و انثنى على آدبه  
و عظيمِ حُزوه على والدته و قال بَارِكَ اللهُ فيكَ و اعانَكَ  
على برِّ ابيك و اهدنى اليه الساعةُ دليلًا على عِظَمِ اعتباره  
ايَّاهُ و اكدَّ عليه ان يتنازلَ الغداءَ بعدَ ذَلِكَ على مائدتهِ  
بعدَ ذَلِكَ على مائدتهِ كلَّ يومٍ لتسهلَ عليه مساعدةُ والدتهِ  
بما يكتسبهُ فانَّ مَنْ يُعينُ والديه تَميلُ القلوبُ اليه و يسعدُ  
في داره \*

5. (a) Conjugate |مِرْحَاضُ مَعْرُوفٍ| from تَخْشَى .

10

(b) Give the opposite numbers of—

مَتَاع - خَلِيل - اَعْدَاء - مَلُوك - طَرِيقَة -

6. Translate into Arabic :—

25

The original name of Sher Shāh was Farid. His father was Hasan, an Afghān of the tribe of Soor, and a native of Roh in Peshāwar. When Bahlol Lodi ascended the throne, Ibrāhīm Khān, the father of Hasan Soor, came to Delhi in quest of military service. The seat of these Afghāns is Roh, a word which, in their language, signifies a mountainous country. It extends in length from Sawād and Bijaur to the town of Seewy, in the territory of Bhukkur, and in breadth, from Hasan Abdal to Kabul.

## PERSIAN

## FIRST PAPER

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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

20

(a)

شکر و سپاس و منت و عزت خدا را  
پروردگار خلق و خداوند کبریا  
دادار غیب دان و نگهدار آسمان  
رزاق بنده پرور و خلاق رهنما  
اقرار می کند در جهان بر یگانگیش  
یکتا و پشت عالمیان بر درش دوتا  
گوهر ز سنگ خارا کند لؤلؤ از صدف  
فرزند آدم از گل و برگ گل از گیا  
باری ز سنگ چشمه آب آورد پدید  
باری ز آب چشمه کند سنگ ذره سا  
گاهی ب صنع ماشطه بر روی خوب رز  
گلگونه شفق کند و سرمه دجا

(b)

ای ز تو شق خرقه ماه منیر  
پیش تو مهر آمده فرمان پذیر  
قصر نبوت به تو چرون شد بلند  
کسر بمقصورة کسری فکند

چتر فرازنده فرقت سحاب  
 سایه نشین چتر ترا آفتاب  
 سایه ندیدت بزمین هیچ کس  
 نور بود سایه خورشید و بس  
 جانت ز آرایش قن پاک بود  
 سایه نینداخت برین خاک تو  
 شمعی و نور از تو رسد جمع را  
 پستی و روی نه بود شمع را

2. (a) Comment on the construction of any *three* of the following words :— 5

ماه منیر - فرمان پزیر - قصر نبوت - مقصود کسری - سایه نشین

(b) Explain the allusions in the extract (b) of Question 1. 8

3. Explain any *two* of the following :— 10

(a)

چرخ روش قطب ثبات از تو یافت  
 باغ رجود آب حیات از تو یافت

(b)

ز شعرم خامه را شکر زبان کن  
 ز عطرم نانه را عنبر فشان کن

(c)

صدر نشین ارست درین پیشگاه  
 گفت نبیا بود آنرا گواه

4. Give in your own words the story of *either* 9

حکایت فریدون در شکارگاه

or

حکایت زن زشت‌رو خریدار کوری یافته بود

5. (a) Explain the force of *که* in the following :— 6

که کرد که نیافت - مارا چه ازین قصه که گار آمد و  
 خر رفت - ترا که بر روی خوب شیدا شو

(b) Give the rules for the formation of *مضارع* in Persian. 6  
 Illustrate them with examples.

6. (a) Write down etymological notes on any four of the following :— 6

ستمگار - رامشگر - خررشد - گلبن - هرسناک - خمخانه

- (b) Give the meaning of the following words :— 5

شعنه - صید - صغیر - افراط - تفريط

7. Translate into Persian :—

25

Ibn-i-Batūta, a Muslim traveller, came to India during the reign of Sultan Muhammad Tughlaq. Having left his home in Tangier he roamed about for several years in Egypt, Arabia, Persia, India, China, Palestine, and Spain. He then returned to his native land. He has recorded the experiences of his travels in an excellent book called *Kitabu'r-Rihla*. This work he wrote in Arabic.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following :—

20

A

عدل شعبه ایست ملک آرای و لمعه ایست نور افزای و  
ظلمت زدای - و حق سبحانه و تعالی بندگان را بدین  
صفت میفرماید - حیث قال <sup>ع</sup> إِنَّ اللَّهَ يَأْمُرُ بِالْعَدْلِ وَالْإِحْسَانِ -  
عدل آنست که داد مظلومان دهند و احسان آنکه مرهم  
راحتی بر جراحت مجروحان نهند - و در خبر آمده که یک  
ساعت عدل بادشاه در پلک میزان طاعت راجم تر است از  
عبادت شصت ساله - زیرا که نتیجه عبادت جز بعمل نرسد  
و فایده عدل بخاص عام و خرد و بزرگ راصل گردد \*

B

آورده اند که درویشی در بیشه میگذشت و در آثار  
رحمت و اطوار قدرت اندیشه میفرمود - ناگاه شاهبازی تیزپر  
دید قدومی گوشت در چنگال گرفته گرد درختی پرراز می  
کرد و باهتر از تمام بر حوالی آشیانه طوف می فرمود - مرد

ازین معنی متعجب شده زمانی بنظاره بایستاد - کلاغی بی بال و پر دید در آن آشیانه افتاده و آن باز پاره پاره گوشت جدا می کرد و بقدر حوصله کلاغ بی بال و پر در دهانش می نهاد - مرد گفت سبحان الله عزایت بادشاهی و رحمت نامتناهی نگر که کلاغ بی بال و پر را که نه قوت طیران دارد و نه شوکت جولان در گوشه این آشیانه بی روزی نمی گذارد \*

C

در آیام محاربه با افغانان نادرشاه سفیری بدھلی فرستاد و از بادشاه هندوستان خواهش کرد که بنابر اتحاد ما بین دولتین مامور متوقع آنست که احکام بحکام اضلاع شمالیه صادر شود که فراریان آفغانه را که دشمنان این دولت و از شمشیر غازیان این حضرت گریزان گشته اند در آن بلاد راه و پناه ندهند - بر حسب مرضی جوائی نرسید - و آفغانه همه روزه بدانصفحات فراری شده ملاذ و ملجأ می یافتند - در دربار دھلی نیز هر روز عایقی بجهت معاودت ایلچی ایران پیدا می کردند - نادر را ازین حرکت نایره غضب اشتعال یافته فراریانرا تعاقب کرد \*

2. Answer any two of the following :—

12

- (a) Give an account of یزدجرد انیم .  
 (b) Briefly narrate the تسخیر قلع سورمنات by Sultan Mahmūd.  
 (c) Write short notes on :—

هویه سنبأ and ذر الاکتاف - مسعودی - دابشلیم

8. (a) Explain and make clear the allusion :—

4

نظر کردن بدریشان بزرگی را بیفزاید  
 سلیمان با همه حشمت نظرها کرد با مورش

(b) Form sentences with the following :—

4

فرود آمد and لاف زد - برهم زد - برآمد

4. Translate into English any two of the following :—

35

A

یکی فضلا تعلیم ملک زاده همیکردی و ضرب بیمحابا  
زدی و زجر بیقیاس کردی - باری پسر از بیطاقتی شکایت  
پیش پدر برد و جامه از تن دردمند برداشت - پدر را  
دل بهم برآمد - استاد را بخواند و گفت پسران رعیت را  
چندان زجر را نمی داری که فرزند مرا سبب چیست -  
گفت سبب آنکه سخن آندیشیده گفتن و حرکت پسندیده  
کردن همه خلق را علی العموم باید و بادشاهان را علی الخصوص  
بموجب آنکه بردست و زبان ایشان هرچه رود هر آینه  
بافواه بگویند و قول و فعل عوام را چندان اعتباری نباشد \*

\* قطعه \*

اگر صد عیب دارد مرد درویش  
رفیقانش یکی از صد ندانند  
وگر یک ناپسند آید ز سلطان  
ز اقلیمی باقلیمی رسانند

B

گویند امام شافعی شش ساله بود و بدیرستان می  
رفت و مادرش زاهده بود از بنی هاشم و مردمان بدو  
امانت سپردند - روزی دو کس پیامدند و جامه دانی بدو  
سپردند و بعد از آن یکی از آن دو کس پیآمد و جامه دانی  
خواست - بوی داد - و بعد از آن یک چند آن دیگر  
پیآمد و جامه دانی طلبید - گفت بیار تو دادم - گفت نه  
قرار داده بودم که تا هر دو حاضر نباشیم ندهی - گفت  
بلی - گفت اکنون چرا دادی - مادر شافعی ملول شد -  
شافعی در آمد و گفت ای مادر ملالت چراست - حال  
باز گفت - شافعی گفت هیچ باک نیست مدعی کجاست



تا جواب گویم - مدعی گفت منم - شافعی گفت جامه دان  
برجاست برر یار خود را بیار و جامه دان بستان : آن مرد را  
عجب آمد و متعیر شد و از سخن او برفت \*

0

دیدم گل تازه چند دسته \* بر گنبدی از گیا بسته  
گفتم چه بود گیاه ناچیز \* تا در صف گل نشیند او نیز  
بگریست گیاه و گفت خاموش \* صحبت نکند کرم فراموش  
گریست جمال رنگ و بویم \* آخر نه گیاه باغ اویم  
من بنده حضرت کریم \* پرورده نعمت قدیم  
گر بی هنرم و گر هنرمند \* لطف ست امیدم از خداوند

5. Translate into Persian :—

25

Looking at him and his work from every aspect, Muhammad was not merely a heroic prophet, but he was much more, a king and a leader of men, a ruler and a judge over them. If we are to judge of him, to take him for what he is worth, we must pronounce him to have been a great and remarkable man, a man who, when his true value is understood and appreciated, will stand out in history as a political and religious reformer of a virile and heroic type.

## LATIN

### FIRST PAPER

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REV. FATHER VERBOCK HAVEN, S. J.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Translate :—

16

(a) Domuisti gentes immanitate barbaras, multitudine innumera-  
biles, locis infinitas, omni copiarum genere abundantes : sed tamen ea  
viciisti, quae et naturam et condicionem ut vinci possent habebant; nulla  
est enim tanta vis quae non ferro et viribus debilitari frangique possit :  
animum vincere, iracundiam cohibere, victoriam temperare, adversarium  
nobilitate, ingenio, virtute praestantem non modo extollere iacentem,  
sed etiam amplificare eius pristinam dignitatem, haec qui facit, non ego  
eum cum summis viris comparo, sed simillimum deo iudico.

(b) Haec igitur tibi reliqua pars est : hic restat actus, in hoc elaborandum est, ut rem publicam constituas, eaque tu in primis summa tranquillitate et otio perfuare : tum te, si voles, cum et patriae quod debes solveris et naturam ipsam expleveris satietate vivendi, satis diu vixisse dicito. Quid est enim omnino hoc ipsum diu, in quo est aliquid extremum? Quod cum venit, omnis voluptas praeterita pro nihilo est, quia postea nulla est futura. Quamquam iste tuus animus numquam his angustiis, quas natura nobis ad vivendum dedit, contentus fuit, semper immortalitatis amore flagavit.

2. What is the relation of the speech for Marcellus to the state of party politics in Rome at the time it was delivered? 8

3. Comment briefly on :— 8

(a) Nam cum M. Marcellum deprecantibus vobis rei publicae (Caesar) conservavit.

(b) Satis diu vel naturae vixi vel gloriae.

(c) Obstupescent posteri certe imperia, provincias, Rhenum, Oceanum, Nilum.

(d) Perfuncta res publica est hoc misero fatalique bello.

(e) Ceteros quidem omnes victores bellorum civilium iam ante aequitate et misericordia viceris : hodierno vero die te ipsum vicisti.

4. What in your opinion are the chief merits and demerits of Cicero's style of oratory? 8

5. Translate :— 16

(a) Gentis humanae pater atque custos,  
orte Saturno, tibi cura magni  
Caesaris fatis data : tu secundo  
Caesare regnes.  
ille seu Parthos Latio imminentes  
egerit iusto domitos triumpho,  
sive subiectos Orientis orae  
Seras et Indos,  
te minor laetum reget aequus orbem ;  
tu gravi curru quaties Olympum,  
tu parum castis inimica mittes  
fulmina lucis.

(b) Privatus illis census erat brevis,  
commune magnum : nulla decempedis  
metata privatis opacam  
porticus excipiebat Arcton,  
nec fortuitum spernere caespitem  
leges sinebant, oppida publico  
sumptu iubentes et deorum  
templa novo decorare saxo.

6. Write notes on any six of the following :— 8

- (a) Grave ne rediret  
saeculum Pyrrhae nova monstra questae.  
(b) Vario.....Maeonii carminis aliti.  
(c) Ambiguam tellure nova Salamina.  
(d) Cantonis nobile letum.  
(e) Fabulosus Hydaspes.  
(f) O diva, gratum quae regis Antium.  
(g) Fortis et asperas tractare serpentes.  
(h) Cantabrum indoctum iuga ferre nostra.  
(i) Damnatus longi Sisyphus Aeolides laboris.  
(j) Tyrannus Hesperiae Capricornus undae.  
(k) Daedalion tutior Icaro.

7. Either, Scan the passage in 5 (b). 8

Or, Give the meaning of—*atavis edite regibus, sub Iove frigido, nil mortalibus ardui est, nil desperandum Teucro duce, carpe diem, cuius octavum trepidavit aetas claudere lustrum, quem Venus arbitrum dicet bibendi, non si male nunc et olim sic erit.*

8. Discuss the use Horace makes of (a) Roman history, (b) Greek mythology. 8

9. Parse, giving the principal parts :—*fretus, functus, oriturus*, 10  
*perando, tollite, age, daret, moreris.*

10. Explain and illustrate by sentences the chief uses of—*quoniam, dum, quamvis*. 10

Give the Latin for—ten years ago, in my lifetime, a man of great courage, all good citizens, we must all die, what time is it?, away with care.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Latin :— 40

'Do you dare to say', cried the infuriated mutineers, 'that the soldiers in the camp did not again and again entreat you to lead them against the enemy? Have you anything to reply to this accusation? If so, speak; if not, confess that you deserve death.' To these words the general replied, 'I see that you are determined to murder me. Yet my oldest lieutenant will bear me witness that I showed my prudence in giving orders for a retreat. I had only two thousand men at the time with me. I did not know which of the two roads through the wood led to Rome. Upon my proposing a retreat to my officers, they all kept silence except two, who expressed their approval of it; and in the end it was unanimously determined on.'

2. Translate into English one of the following :— 30

(a) *The Character of Catilina.*

L. Catilina, nobili genere natus, fuit magna vi et animi et corporis sed ingenio malo pravoque. huic ab adulescentia bella intestina, caedes, rapinae, discordia civilis grata fuere, ibique iuventutem suam exercuit. Corpus patiens inediae, alboris, vigiliae supra quam cuiquam credibile est. Animus audax subdolanus varius, cuius rei lubet simulator ac dissimulatur, alieni adpetens, sui profusus, ardens in cupiditatibus: satis eloquentiae, sapientiae parum. Vastus animus immoderata, incredibilia, nimis alta semper cupiebat.

- (b) *Greek and Latin.* 30

Nam si quis minorem gloriae fructum putat ex Graecis versibus percipi quam ex Latinis, vehementer errat, propterea quod Graeca leguntur in omnibus fere gentibus, Latina suis finibus, exiguis sane, continentur. Quare si res eae, quas gessimus, orbis terrae regionibus definiuntur, cupere debemus, quo manuum nostrarum tela pervenerint, eodem gloriam famamque penetrare, quod cum ipsis populis, de quorum rebus scribitur, haec ampla sunt, tum eis certe, qui de vita gloriae causa dimicant, hoc maximum et periculorum incitamentum est et laborum.

## 3. Translate into English :—

30

*A sign from heaven.*

Vix ea fatus erat : defixique ora tenebant  
 Aeneas Anchisiades et fidus Achates,  
 Multaque dura suo tristi cum corde putabant;  
 Ni signum caelo Cytherea dedisset aperto.  
 Namque improvise vibratus ab aethere fulgor  
 Cum sonitu venit, et ruere omnia visa repente,  
 Tyrrhenusque tubae mugire per aethera clangor.  
 Suspiciunt; iterum atque iterum fragor increpat ingens.  
 Arma inter nubem caeli in regione serena  
 Per sudum rutilare vident et pulsa tonare.  
 Obstipuerunt animis alii; sed Troius heros  
 Adgnovit sonitum et divinae promissae parentis.

## FRENCH

## FIRST PAPER

Paper-Setters and Examiners—{REV. FATHER E. POPULAIRE, S.J.  
 {MR. NAGENDRANATH CHANDRA, M.A.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

## 1. Translate into English any three of the following passages :—

(a) Un silence de mort avait succédé à cette conclusion inattendue. 8  
 Tous, nous nous sentions coupables dans une certaine mesure des méfaits  
 de Thomereau; nous comprenions maintenant combien nous avions  
 été coupables de nous associer à la mystification poursuivie pendant deux  
 ou trois semaines consécutives contre un homme de grand cœur et de  
 profond savoir. Cela nous allait bien, à nous misérables blancs-becs et  
 ignorants gamins, de rire aux dépens d'un savant éminent comme  
 M. Desbans! Mais son tour était venu maintenant, et il ne nous restait  
 plus qu'à courber le front devant la tempête.

(b) 'En discours latin, reprit le proviseur, nous avons été moins 8  
 heureux : M. Dutheil a un premier accessit; mais c'est un élève de  
 Charlemagne, M. Monnerol, qui a le prix d'honneur de rhétorique, et un  
 élève de Saint-Louis, M. Julineau, qui a celui de philosophie .....Le  
 second prix de discours français nous reste, et c'est M. Dutheil qui l'a  
 obtenu; un troisième accessit est attribué à M. Besnard. En version  
 grecque, M. Besnard a un second accessit, et M. Dutheil un quatrième.  
 ..... M. Baudouin a un second accessit de version latine.....'

(c) 'Oui, mesdames et messieurs, moi, Monin-Javot, ici présent 8  
 et parlant à vos personnes, j'offre une prime de cinq cent mille francs à  
 celui qui me tombera! (Mouvement général de stupeur.) Cinq cent mille  
 francs, en billets de la Banque de France;—en or,—en valeurs à vue  
 sur M. le baron de Rothschild! .....Et fort heureux je serai d'acquitter  
 cette dette sacrée, je vous le jure, car cela me prouvera que la sang de  
 la vieille Gaule n'a pas dégénéré.' (M. Monin-Javot essuie une larme  
 en envoyant un grand coup de latte à la toile peinte tendue derrière lui.)

(d) A sept heures moins dix minutes nous débouchions sur la place Gerson, au milieu de contingents envoyés par les autres lycées. Il ne se passait pas d'instant qu'un détachement nouveau ne fit son apparition. On se montrait au passage les noms connus, les lauréats de l'année dernière, les vainqueurs probables que désignait la rumeur des lycées. Un bourdonnement de ruche emplissait cette place étroite et comme encaissée sur trois côtés dans de hautes constructions. Sept heures sonnent. Les deux battants s'ouvrent avec un grand bruit de barres de fer et de gonds criards.

- |   |    |
|---|----|
| 2. Write in brief the plot of Molière's <i>L'Avare</i> .                                      | 20 |
| 3. Write short notes on :— <i>grand'chance, Auvergnats, tout-à-l'heure</i> .                  | 6  |
| 4. (a) Give the superlative forms of— <i>bon, mauvais; bien, mal</i> .                        | 4  |
| (b) Conjugate the future simple, indicative mood, of— <i>savoir, courir, envoyer</i> .        | 9  |
| (c) Give the plural forms of— <i>ver-à-soie, coffre-fort, bétail, détail, bijou, verrou</i> . | 6  |
| (d) Give the infinitive past of <i>aller</i> .  | 1  |
| 5. Translate into French :—   | 30 |
| (a) Have you been to Darjeeling, so cool and agreeable in summer?                             |    |
| (b) The train will leave from platform No. 5, at 8.55 p.m.                                    |    |
| (c) My brother will wait for me at the station.   |    |
| (d) My mother is sick, and I must not go out this evening.                                    |    |
| (e) The sun rises in the east, and sets in the west.  |    |
| (f) It is hot in the afternoon, but it gets rather cool in the evening and lovely at night.   |    |
| (g) In summer the days are long and the nights short.   |    |
| (h) At Agra we saw the Taj Mahal under a full moon.   |    |
| (i) Can you tell me the name of a famous French dramatist?                                    |    |
| (j) He came in uniform, and we could not recognize him.                                       |    |

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

- |   |    |
|---|----|
| 1. Translate into English one of the following :—   | 25 |
| (a) 'Sire, dit le Renard, vous êtes trop bon roi ;<br>Vos scrupules font voir trop de délicatesse.<br>Eh bien ! manger moutons, canaille, sotté espèce,<br>Est-ce un péché ? Non, non. Vous leur fîtes, seigneur,<br>En les croquant, beaucoup d'honneur.<br>Et quant au berger, l'on peut dire<br>Qu'il était digne de tous les maux,<br>Etant de ces gens-là qui sur les animaux<br>Se font un chimérique empire.'<br>Ainsi dit le Renard ; et flatteurs d'applaudir<br>On n'osa trop approfondir<br>Du Tigre, ni de l'Ours, ni des autres puissances,<br>Les moins pardonnables offenses :<br>Tous les gens querelleurs, jusqu'aux simples Mâtins,<br>Au dire de chacun, étaient de petits saints. |    |

L'Ane vint à son tour, et dit : 'J'ai souvenance  
 Qu'en un pré de moines passant,  
 La faim, l'occasion, l'herbe tendre, et, je pense,  
 Quelque diable aussi me poussant,  
 Je tondis de ce pré la largeur de ma langue;  
 Je n'en avais nul droit, puisqu'il faut parler net.'  
 A ces mots on cria haro sur le baudet.

- (b) Souvent sur la montagne, à l'ombre du vieux chêne,  
 Au coucher du soleil, tristement je m'assieds;  
 Je promène au hasard mes regards sur la plaine,  
 Dont le tableau changeant se déroule à mes pieds.  
 Ici gronde le fleuve aux vagues écumantes;  
 Il serpente, et s'enfonce en un lointain obscur;  
 Là, le lac immobile étend ses eaux dormantes  
 Où l'étoile du soir se lève dans l'azur.  
 Au sommet de ces monts couronnés de bois sombres,  
 Le crépuscule encor jette un dernier rayon;  
 Et le char vapoureux de la reine des ombres  
 Monte, et blanchit déjà les bords de l'horizon.  
 Cependant, s'élançant de la flèche gothique,  
 Un son religieux se répand dans les airs :  
 Le voyageur s'arrête, et la cloche rustique  
 Aux derniers bruits du jour mêle de saints concerts.

2. Translate into English one of the following :—

25

(a) Vous vous souvenez bien que nous partîmes à sept heures du matin. Il fit un temps superbe jusqu'à une heure après midi, quand un orage affreux nous surprit à l'improviste. Le vent fut si violent qu'il arracha nos cartons et nos boîtes de dessus la voiture et les emporta à plus de cent pas dans la plaine. La pluie tombait comme du temps du déluge et nous mouilla jusqu'aux os. Nous voilà donc en plein champ, sans parapluie, moi vêtue d'un simple fourreau de linon et chaussée de légers souliers de soie, courant après mes hardes qui se familiarisent avec les pommes de terre et les choux qui couvrent les champs. Pour surcroît de malheur, notre cocher avait bu une bouteille de trop avant le départ; il nous verse dans un fossé. Heureusement quelques paysans, qu'invirent à passer auprès de nous, eurent la complaisance de relever la voiture, car sans cela nous serions peut-être encore sur la chaussée à l'heure qu'il est.

(b) Plus docile que l'homme, plus souple qu'aucun des animaux, non seulement le chien s'instruit en peu de temps, mais même il se conforme aux mouvements, aux manières, à toutes les habitudes de ceux qui lui commandent; il prend le ton de la maison qu'il habite, comme les autres domestiques; il est dédaigneux chez les grands et rustre à la campagne; toujours empressé pour son maître et prévenant pour ses seuls amis, il ne fait aucune attention aux gens indifférents, et se déclare contre ceux qui, par état, ne sont faits que pour importuner; il les connaît aux vêtements, à la voix, à leurs gestes, et les empêche d'approcher; lorsqu'on lui a confié pendant la nuit la garde de la maison, il devient plus fier, et quelquefois féroce; il veille, il fait la ronde, il sent de loin les étrangers et pour peu qu'ils s'arrêtent ou tentent de franchir les barrières il s'élance, s'oppose, et, par des aboiements réitérés, des efforts et des cris de colère, il donne l'alarme, avertit et combat.

3. Translate into French :—

(a) Robert was fourteen, and had just left school. As his mother was a widow, it was necessary that he should do his best to help, for there were several sisters and brothers younger than he. It was his first day in his new employment, and he looked about him in the shop. 'How mother and the children would like some of these things!' he

25

thought, and wished that Saturday would come, so that he could spend a part of his wages and take home some of the nice things the shop contained. But it was only Monday, and he had all the week before him.

(b) It was upon the first of October that the treaty was finally 25  
to be signed. In the morning I was congratulating Monsieur Otto upon the happy conclusion of his labours. He was a little pale man, very quick and nervous. He was so delighted now at his own success that he could not sit still, but ran about the room chattering and laughing, while I sat on a cushion in the corner, a habit I had learned in Turkey. Suddenly in came a messenger with a letter which had been forwarded from Paris. Monsieur Otto opened it, and then without a word, his knees gave way and he fell senseless upon the floor.

## BENGALI (FOR FEMALE CANDIDATES)

### FIRST PAPER

Paper-Setters— { MR. S. P. MOOKERJEE, M.A., B.L.,  
BARRISTER-AT-LAW.  
{ RAI KHAGENDRANATH MITRA, BAHADUR, M.A.

Examiner—MRS. TATINI DAS, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English either of the following passages :—

16

(a) অরাজক রাজ্যের সর্বদা অকুশল ।  
অরাজক পৃথিবীতে নহি হয় জল ॥  
অরাজক রাজ্যে সদা হয় ডাকা চুরি ।  
অরাজক রাজ্যে দেখি বড় ভয় করি ॥  
অরাজক রাজ্যে অল্প নুপতি গরজে ।  
অরাজক রাজ্যে প্রজালোক দুঃখে মজে ॥  
অরাজক রাজ্যে না বরিষে পুন্নর ।  
অরাজক রাজ্যের অশুভ বহুতর ॥  
অরাজক রাজ্যে সদা হিতে বিপরীত ।  
অরাজক রাজ্যে থাকি অতি অশুচিত ॥

(b) ভারত জগৎ নহে । নহে এই পারাবার  
এই জগতের সীমা । অস্ত পারে তার  
আছে মহারাষ্ট্রের অনন্ত বিস্তার ।  
আছে বহু পারাবার, আছে বহু হিমাচল,  
আছে বহু নন্দনদী কানন কান্তার ;  
আছে বহু নর জাতি নানা বর্ণ নানা বেশ,  
সুউমের এই নর ভুলনার তার ।

2. Explain with reference to the context any four of the following passages :— 24

- (a) কুক্ষণে জনম মম, সরমা রাকসি ;  
 স্থখের প্রলীপ, সখি, নিবাইলো সন্ধ্যা  
 প্রবেশি যে গৃহে, হায়, অমঙ্গল রূপী  
 আমি । পোড়া ভাগ্যে এই লিখিলা বিধাতা !  
 নরোত্তম পতি মম, দেখ, বনবাসী !
- (b) প্রণমিয়া গুরুজনে মধুর-ভাষিণী  
 সন্তাষি মধুর ভাবে দৈত্যবাদলে,  
 কহিলা : “ লো সহচরি, এত দিনে আজি  
 ফুরাইল জীবলীলা জীবলীলাস্থলে  
 আমার, ফিরিয়া সবে যাও দৈত্যদেশে !  
 কহিও পিতার পদে এ সব বারতা,  
 বাসন্তি মায়েরে মোর ”—
- (c) আজো ফোটে নাই সে ফুল, শুধু  
 বাহছে এক হাওয়া ।  
 আমি দেখি নাই তা’র মুখ, আমি  
 শুনি নাই তা’র বাণী,  
 কেবল শুনি কণে কণে তাহার  
 পায়ের ধ্বনি খানি ।  
 আমার দ্বারের সমুখ দিগে সেজন  
 করে আসা-যাওয়া ।
- (d) ও গো যোন, না যদি কও না-ই কহিলে কথা ।  
 বক্ষ ভরি বইব আমি তোমার নীরবতা ;  
 শুদ্ধ হ’য়ে রইব পড়ে,  
 রজনী রয় যেমন করে’  
 জালিয়ে তারা নিষেধ-হারা  
 ধৈর্যে অবনতা
- (e) নিঃস্ব হ’য়ে বিশ্বে এলে, দয়্যার অবতার ।  
 কোথাও তবু নোয়াওনি শির জীবনে একবার !  
 দয়্যায় মেহে ক্ষুদ্র দেহে বিশাল পারাধার,  
 সৌম্যমুষ্টি তেজের ক্ষুষ্টি চিত্ত চমৎকার !
- (f) অন্নদা তুই অন্ন নিতে পিছ-পা নহিস বৈরীকে  
 গৌরী ভূমি—তৈরী ভূমি গিরিগাজের গৈরিকে !



লক্ষ্মী তুমি জন্ম নিলে বঙ্গ সাগর মস্তনে,  
পারিজাতের ফুল তুমি গো ফুটলে পারত-নন্দনে ;  
চন্দনে তোরা রক্ত পরশ, হরষ নদী-দুল্লোলে,  
শ্রাবণ যেষে পবন বেগে তোমার কালো কেশ দোলে ।

3. *Either*, Describe the scenes which attended the ceremony of 10  
Pramila's ascending the funeral pyre of her husband.

*Or*, Give in your own words the substance of Satyendranāth Dutt's 10  
জাতির পীতি ।

*Or*, Describe the manner in which Abhimanyu's Death was accom- 10  
plished by the Kaurava heroes.

4. (a) Name and expound the *samāsas* in any three of the following 9  
compound words :—

চক্ষুজ্জা, পিতৃভক্তি, রাজপুরুষ, মহাজন, অতীন্দ্রিয় ।

(b) Substitute a compound word for each of the following phrases 8  
and frame a sentence with each of such words :—

যিনি সর্বলোকের দ্বারা পূজিত হয়েন ;

বাহার হস্তে শস্ত আছে ;

যিনি আইন ব্যবসায়ের দ্বারা জীবিকা নির্বাহ করেন ;

বাহাকে দেখিলে প্রীতিলাভ হয় ।

(c) How are the following words formed? Name the *samāsas* in 8  
them, if any.

জলকাটা, মাছধরা, হাড়ভাঙ্গা, বাটনাবাটা ।

5. Translate into English :—

25

*Either*,

(a) বর্তমান মধ্যপ্রদেশের উত্তরে সেকালে গড়মণ্ডল নামে একটি  
ছোট রাজ্য ছিল। এই রাজ্যের খ্যাতি বহুদূর বিস্তৃত ছিল। এই  
রাজ্যের রাণী দুর্গাবতী অসামান্য রূপবতী ছিলেন। গড়মণ্ডলের অভুল  
ঐশ্বর্যের কথা আকবরের সেনাপতির কানে পৌঁছিল। অবশেষে  
তিনি ৬০০০ সৈন্য লইয়া এই রাজ্য আক্রমণ করিলেন। রাণী দুর্গাবতী  
ভয় পাইলেন না। তিনি ১৫০০ হাতী ও আট হাজার সৈন্য লইয়া  
স্বদেশ-রক্ষার জন্য যুদ্ধে প্রবৃত্ত হইলেন। হাতীর উপর বসিয়া স্বয়ং  
সৈন্য চালনা করিতে লাগিলেন। ভয়ঙ্কর যুদ্ধ হইল। হঠাৎ এক তীর  
আসিয়া রাণীর চক্ষে বিধিল। রাণী চক্ষে অন্ধকার দেখিলেন। সৈন্য-  
দিককে আঁজা দেওয়া অসম্ভব হইয়া পড়িল। দুর্গাবতীর আর জয়ের  
আশা রহিল না। তখন তাঁহার চেষ্টা হইল কিসে যান বাঁচাইতে  
পারেন। তিনি যাহাতের নিকট হইতে একখানি ছুরি কাড়িয়া লইয়া  
নিজের বুকে বসাইয়া দিলেন। এইরূপে গড়মণ্ডলের স্বাধীনতা চিরদিনের  
যত অন্তর্হিত হইল।

Or,

(b) অল্প কালের মধ্যেই অর্জু ষ্টিফেন্সন্ এক কয়লার খনিতে ভ্রাব্যধায়ক-পদে নিযুক্ত হইলেন। সেখানে দক্ষতার সহিত কার্য কয়লার দেশে তাঁহার সুনাম প্রচারিত হইল। এই সময়ে একজন ধনী তাঁহাকে কিছু অর্থ দিয়াছিলেন। তদ্বারা ষ্টিফেন্সন্ একখানি এঞ্জিন প্রস্তুত করেন। কলিংওয়ার্থ নামক সহরের নিকটে উক্ত এঞ্জিন খানি চালাইয়া উহারকার্য পরীক্ষা করেন। সেই সময় ষ্টিফটন্ হইতে ডার্লিংটন পর্যন্ত ট্রাম লাইন খুলিবার প্রস্তাব চলিতেছিল। ১৮১৬ খৃষ্টাব্দে তিনি ঐ ট্রাম লাইনে তাঁহার প্রস্তুত এঞ্জিনের সাহায্যে সর্ব প্রথম রেলগাড়ী চালাইবার অল্পমতি পাইলেন। তাঁহার এই রেলগাড়ীতে ময়লা ও কয়লা পূর্ণ ছয়খানি এবং আরোহি পূর্ণ একখানি গাড়ী ও একখানি এঞ্জিন ছিল। স্বয়ং ষ্টিফেন্সন্ই ইহার চালক ছিলেন। এই ট্রেনের আগে আগে এক ব্যক্তি অস্বাভাবিক নিশান উড়াইতে উড়াইতে চলিতে লাগিল। কিন্তু অল্প সময়ের মধ্যে সে বহু পশ্চাতে পড়িয়া রহিল। নব্বই টন ভারী মাল টানিয়া, ঘণ্টায় পনেরো মাইল বেগে ট্রেন ডার্লিংটন সহরে পৌছিল।

## SECOND PAPER (PROSE TEXTS)

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate either of the following passages into English :—

(a) বুদ্ধ অধ্যাপক কেন বে এই নবীন যুবককে পুরোহিত পদে বৃত্ত করিয়া গেলেন, ইহার কারণ কিছুই বুঝিয়া উঠা গেল না। আসন গ্রহণ করিয়া অশ্বর সসঙ্কোচে বলিল, “আমার দ্বারা এই সমস্ত কার্য সুচারুরূপে সম্পন্ন হইয়া উঠে বলিয়া আমার ভরসা হয় না। আমায় না দিয়া এই এই কার্যভার বোধ্য হস্তে দান করুন।”

(b) লেখক বলিতেছেন, “এই সময় একটি ছুই বৎসর বয়স্ক শিশু আসিয়া আকাশের দিকে মুখ তুলিয়া হাত পাতিয়া দাঁড়াইল। কেন হাত পাতিল তাহা সে জানেনা; সকলে হাত পাতিয়াছে দেখিয়া সেও হাত পাতিল। আমি তাহার হস্তে একটি পয়সা দিলাম, শিশু তাহা ফেলিয়া দিয়া আবার হাত পাতিল, অল্প বালক সে পরসী কুড়াইয়া লইলে শিশুর ভগিনীর সহিত তাহার তুল্য কলহ বাধিল।”

2. Explain any three of the following with reference to the context :—

24

(a) রামমোহন বঙ্গ সাহিত্যকে গ্রাণিটস্তরের উপর স্থাপন করিয়া নিমজ্জন দশা হইতে উন্নত করিয়া তুলিয়াছিলেন, বঙ্কিমচন্দ্র তাহারই উপর প্রতিভার প্রবাহ ঢালিয়া স্তরবদ্ধ পাল মৃত্তকা ক্ষেপণ করিয়াছিলেন।

(b) বঙ্গদর্শনকে যদি আধুনিক বঙ্গ সাহিত্যের প্রভাতসূর্য্য বলা যায়, তবে ক্ষুদ্রায়তন অবোধবন্ধুকে প্রত্যাষের শুকতারি বলা যাইতে পারে। সে প্রত্যাষে অধিক লোক জাগে নাই এবং সাহিত্য-কুঞ্জে বিচিত্র কলগীত কুঞ্জিত হইয়া উঠে নাই। সেই উষালোকে কেবল একটি ভোরের পাখী স্মৃষ্টি স্মর স্বরে গান ধরিয়াছিল।

(c) শিশুকাল হইতে অতিক্রান্ত প্রায় কৈশোর ব্যাপিয়া যে একটি সংঘমপূর্ণা, নিয়মচারিণী, শুদ্ধ-সঙ্ক-কুমারী-জীবন এই সংসারটিতে পুণ্য দেবানীর্কাদের মত আবির্ভূত হইয়া রহিয়াছে, ইহাই তাহার সর্বপ্রধান ঐশ্বর্য্য ও শোভা।

(d) সে শুধু দেখিত সেই গভীর মনোনিবেশেরই ছবিখানি ভক্তির শরীরিণী মূর্ত্তি। সে মূর্ত্তি দেখিয়া তাহার হৃদয়-সমুদ্রে ভক্তির তরঙ্গ উঠিত—উপাসনার আগ্রহ বর্দ্ধিত হইত।

3. Explain any three of the following passages :—

107

(a) আজকালকার দিনে যে নারী কেবল একান্তভাবেই গৃহিণী, তিনি আমাদের আদর্শ নহেন, ঘরে বাহিরে সর্বত্রই যিনি কল্যাণী, তিনিই আদর্শ—যাঁহার জীবন কেবলমাত্র চিরাগত প্রাদেশিক প্রথা ও সংস্কারের ছাঁচে ঢালা, তিনি আদর্শ নহেন, কিন্তু যাঁহার মধ্যে বৃহৎ বিশ্বের জ্ঞান ও ভাবের বিচিত্র ধারা গভীর ও স্পন্দর ভাবে সঙ্গতি লাভ করিতে বাধা না পায়, তিনিই আদর্শ।

(b) হে মাতঃ হৃদয়ে ধর,  
সন্তানের ত্রাস হর,  
তোমা বিনা ভব-ছাথে কোথা পরিজ্ঞান।  
ভূমি পরশিলে করে,  
অর, জালা. তাপ হরে,  
তব অঙ্গ শঙ্কাস্পর্শ বৈকুণ্ঠ সমান।  
ভূমি মুখে দিবে যাহা,  
মৃত্যুহরী সূধা তাহা,  
আশীর্বাদ তোমার—অভেদ অঙ্গ-ত্ৰাণ।

(c) ভারতের মুকুটমণি, শিফার তেজস্বল পবিত্র “নালন্দা” তীর্থে বিদ্যার্চিণ যে আশা, আকাঙ্ক্ষা ও হৃদয়ের আবেগ লইয়া গমন করিত,

তাহা স্মরণ করিলে এখনও শরীরে পুলক সঞ্চার হয়। নানা শাস্ত্র রূপ অমূল্য রত্ন বক্ষে ধারণ করিয়া নাগন্দর যে অপূৰ্ণ পাঠাগার স্তরে স্তরে সম্বিত হইয়া উচ্চ প্রাসাদের আকারে দাঁড়াইয়া থাকিত তাহার নাম ছিল রত্নোদধি। কত দেশের কত জ্ঞান রত্ন রাশি যে তথায় সঞ্চিত ছিল, তাহা এখন ধারণার অতীত।

(d) আপন জনের সেবা করা স্বাভাবিক, কিন্তু পরের সেবা করাই প্রকৃত ধর্ম; কারণ সেইখানেই সেবার আসল স্বরূপ এবং সার্থকতা ফুটিয়া বাহির হয়। এ সেবার মধ্যে স্বার্থসংস্পর্শ জনিত কোনও মলিনতা নাই। মানব-হৃদয়ের নিঃস্বার্থ প্রেমই ইহার উৎস। এই প্রেমের স্পর্শ পাইবার জন্য দুঃখতাপক্লিষ্টা কত অসহায় নারী হাহাকার করিয়া মারতেছে, কে তাহাদিগের সেই আকুল ক্রন্দন শোনে!

4. (a) Change the following complex sentences into simple ones :—

6

যে সর্প বিষরে প্রবেশ করিয়াছে, তাহাকে টানিয়া বাহির করা বুদ্ধিমানের কার্য্য নহে;

তীর্থ দর্শনে যেক্রপ পরকালের কর্ম্ম হয়, বাটী বসিয়াও সেক্রপ হইতে পারে;

হৃদয়ে যখন ধর্ম্মভাবের উদয় হয়, তখন পাণপ্রবৃত্তি পলায়ন করিতে পথ পায় না।

(b) What do you understand by *sandhi* and *samāsa*? Give examples of each.

4

5. Re-Write the following, correcting all errors :—

5

আমাবস্থার রাত্রীতে ঘনঘটায়মান অন্ধকারে কোলের মানুষ চক্ষে দেখা যায় না। বায়ুবহণ বন্ধ হইয়া প্রবল ঝটিকা শূচনা করিতেছিল। অগ্নরে অদ্ভুত গর্জন বিস্তৃত হইতে লাগিল। ক্ষনকাল পরে দৃশ্য হইল স্মৃদ্ধ উন্মাদিনী কেশরীর জ্বায়া গোণ্ডাইতেছে।

6. Translate into English either of the following :—

25

(a) তাঁহার চরিত্রে আর একটি বিশিষ্টতা দেখিয়াছিলাম। তাঁহার সরলতা এবং স্পষ্টবাদিতা। যে বিষয় তিনি পছন্দ করতেন না সে সম্বন্ধে তিনি স্পষ্টই বলিয়া দিতেন, তা' তিনি এদেশের লোকই হউন আর ইউরোপের লোকই হউন। তিনি নিজের কাহারও তোষামোদ করিতে পারিতেন না, কিম্বা অস্ত্রের তোষামোদও সহ্য করিতে পারিতেন না। অথচ কাহারও মধ্যে কোনও সঙ্গুণ দেখিলে সর্ব্বাগ্রে তাহা স্বীকার করিতেন। এবং কেহ কোনও শোকে অথবা দুঃখে পড়িলে সর্ব্বাগ্রে তাহার নিকটে আসিয়া হৃদয়ের সমস্ত প্রেম ও সহানুভূতি ঢালিয়া দিতেন।

(b) আমরা এখন চারিদিকেই বিদ্যালয় দেখতেছি, প্রতি বৎসর সহস্র সহস্র বালক বালিকা পরীক্ষায় উত্তীর্ণ হইতেছে শুনিতেছি— আমরা ভুলিয়া গিয়াছি, এই শিক্ষা বিস্তারের জন্য বিদ্যাসাগর মহাশয়কে কত ক্লেশ পাইতে হইয়াছে। তিনি যখন নিজে পাশ্চাত্য জ্ঞানের আশ্বাস পাইলেন, তাহা তাঁহার স্বদেশবাসিগণকে দিবার জন্য ব্যস্ত হইয়া উঠিলেন। গবর্ণমেন্টকে দিয়া স্থানে স্থানে আদর্শ স্কুল স্থাপন করিতে লাগিলেন। কি অস্ববিধাতেই তাঁহাকে কার্য্য করিতে হইয়াছিল—না ছিল উপযুক্ত শিক্ষক, না ছিল উপযুক্ত পাঠ্যপুস্তক! নিজে পাঠ্যপুস্তক রচনা করিতে আরম্ভ করিলেন, এবং অনেক স্থলে নিজে টোলার পণ্ডিত-দ্বিগকে শিক্ষাইয়া, ভূগোল, জ্যামিতি প্রভৃতি বিষয়ে শিক্ষাদান করিবার ব্যবস্থা করিয়াছিলেন।

## HINDI (FOR FEMALE CANDIDATES)

### FIRST PAPER

*Paper-Settlers*—{ PANDIT SAKALNARAYAN SARMA  
LALA SITARAM, B.A.

*Examiner*—MR. AMBIKA BAJPAYI

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Explain fully in Hindi any two of the following passages :—

- (a) मंग्रहु इंगित गोपि काज फल सों दिखरावत । 8  
ज्यों पूरब के करम फलहि सों भेद जनावत ॥  
बिनु डर पालि सरीर अनातुर धरम धख्यो सत ।  
बिनु छोलुपता अरथ, बिना आसक्ति भोगारत ॥
- (b) मागधी सहित नरनाहर सहित चित्त, 8  
चाव गहि गहे पद सतिय मुनीस के ।  
दियो हैं असीस पुत पतिनी कषीस हित-  
कार देनहार फल चार बिसे बीस के ॥
- (c) कियो जेहि पन धारि बावन समर मैं रन घोर । 8  
सदा हाड़ा सुरता को राखि जस बर जोर ॥  
एक तेग बिचारि साथी आपनो बलपूर ।  
युद्ध मैं तित कियो साहस भरिन को जेहि चूर ॥

2. Parse the word जेहि underlined in the last line of 1 (c). What is the usual signification of the suffix हि when added to nouns and pronouns?

3. Explain in Hindi the allusion in :—

5

सूरक्षा सुरलोक गयो ।

4. Explain the following words :—

8

मनोजवा, गाधिसुत, अजोनिज, सरनागत, ननूनपात, कलाधर, नवरंग, सुनासीर ।

5. Translate into English any two of the following passages :—

(a) बादि मम जाति पिंड छेदन पितरगन, 8

संचित स्वधान करिबे मैं मन लायकै ।  
जौन भाग लहत सराध मैं सबिध ताहि,  
भोजन सकत करि नेक न अधायकै ॥

(b) करौ शक्त अभ्यास कुसंगति सों सुत भागी । 8

पंडित साधु उदार जसिन के सँग अनुरागी ।  
नहि प्रमाण करि श्रवण अन्ध सम ताकहं मानौ ।  
ताको कारन खोजि बुद्धि बल सों अनुमानौ ॥

(c) उछाह यों बिसाल पेखि कै प्रभात को नयो । 8

भये प्रसन्न वीर चाव चौगुनो हिये छयो ॥  
खिले मुखारविन्द प्रात सूर देखतै मनो ।  
रिपून चोर जानि चोप जंग सो भयो घनो ॥

6. How are diminutives formed in Hindi? Give examples. 12

7. Re-write the following after correcting the mistakes :— 13

एक गुरु का दुई चेला था । एक ने दाहिने पाव का सेवा की भार ली दूसरे ने बायें पाव का । एक दिन गुरु का दाहिना पाँव बाय पाव के ऊपर आ गई । बायाँ पाँव का सेवा करनेवाला इससे रोषित होकर दाहिने पाव को डंडा से पूजा करने लगे । और बायाँ पाँव का सेवक गुरु का दाहिने पाँव को पीटने लगे ।

8. Translate into English :—

25

हँसने का कारण बहुत साधारण है । मनुष्य बिना हँसे रह नहीं सकता । इसी लिये वह हँसता है । मनुष्य के लिये हँसना अत्यावश्यक है । शरीर और मन की स्वभाविक गति को ठीक रखने के लिये—मनुष्य को विवश होकर हँसना पड़ता है । हँसी शरीर तथा मन के विभ्राम का एक उपाय है । कुछ समय खूब हँस लेने से शरीर की थकावट तथा मन की ग्लानि दूर हो जाती है । मन के प्रसन्न रहने से शरीर भी निरोग रहता है । हँसने से शरीर का खून तेज़ चलने लगता है । श्वास प्रश्वास घनी हो जाती है और मस्तिष्क में अधिक रक्त आ जाता है ।

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any two of the following into English :—

15

(a) राजा ने कविराज कालिदास का पता लगाने के लिये सब देशों में वृत्त भेजा। जब कहीं पता नहीं लगा तब राजा आप ही भेष बदलकर खोजने के लिये निकले।

(b) वहाँ के राजा ने आप ऐसे बुद्धिमान् का गुण न जानकर आप का अपमान किया। जो आप का मन हमारे पास आने का चाहे तो आप का पूरा आदर करने के लिये सब तरह से यत्न किया जाएगा।

(c) पुष्पदन्तगग ने योगबल से नन्दी से छिपकर भीतर जाकर वह सब कथा सुनी और अपनी स्त्री जया से कही।

2. (a) Give the context of 1 (b).

4

(b) What is पुष्पदन्त ?

6

(c) Parse the underlined words in Question 1.

5

3. Explain the following :—

25

(a) जगत् में वह मनुष्य बड़ा शोचनीय है, जिस का विश्वास ईश्वर तथा धर्म पर नहीं है क्योंकि विपत्ति में दोनों मनुष्यों को सान्त्वना देते हैं।

(b) परमात्मा के सब काम मङ्गलकारक हैं। किसी की असह्य विपत्ति भी शुभ परिणाम से शून्य नहीं। उस के द्वारा आज तक किसी की हानि नहीं हुई है।

4. Illustrate the ordinary and special uses of ने and को।

10

5. Translate into English :—

15

(a) पहले अफगानिस्तान में जो हिन्दू मुसलमान होता था। उस को जज़िया कर नहीं देना पड़ता था और विशेष पुरस्कार मिलता था। हिन्दू बने रहनेवालों को कई प्रकार की कठिनाइयाँ थीं। अब यह बात नहीं है। हिन्दू और मुसलमान दोनों अफगान कहलाते हैं वे एक रंग के कपड़े पहिनते हैं और एक स्कूल में पढ़ते हैं।

(b) वैदिक समय में स्त्रियाँ देवी समझी जाती थीं किसी बात में उनका अधिकार पुरुषों से कम नहीं था। वे बड़ी वीर और विदुषी होती थीं। जिस के घर में महिला नहीं होती थी वह समाज में आदर नहीं पाता था। पुरुष जंगल में भी तपस्या के लिये जाते थे तो प्रायः साथ में स्त्री को लिये जाते थे।

6. Translate the following passage into Hindi :—

20

About four years ago, passing a few days with the highly educated daughters of some friends in the neighbourhood, I found domesticated in the family a young lady whom I shall call, as they called her, Cousin Mary. She was about eighteen, not beautiful, perhaps, but lovely certainly to the fullest extent of that loveliest word—as fresh as a rose; as fair as a lily; with lips like winter berries; dimpled, smiling cheeks; and eyes of which nobody could tell the colour, they danced so incessantly in their own gay light.

## HISTORY

### FIRST PAPER

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### HISTORY OF ENGLAND

*Candidates are required to give their answers in their own words  
as far as practicable*

*Six questions to be attempted, of which at least two must  
be from each group*

*The questions are of equal value*

#### A

1. Give a short account of the Anglo-Saxon conquest of Britain.
2. 'Canute, though a foreign conqueror, was a good king.' Discuss.
3. To what extent was Henry II successful in his struggles with the barons and the Church?
4. Sketch the career of Simon de Montfort, with special reference to the part played by him in the evolution of Parliamentary government.



5. 'The Model Parliament of 1295 was important rather for what it was than for what it did.' Explain.
6. Give a short account of the reign of Henry VIII.
7. Write a note on England's relations with Spain in the days of Queen Elizabeth.

## B

8. Review the career of Oliver Cromwell. Was he, in the world of action, 'the greatest because the most typical Englishman of all time'?
9. Write a short note on British colonial expansion in the eighteenth century.
10. 'After Great Britain had waxed fat under a Walpole, it was fortunate for her that she had a Pitt to inspire her to action.' Explain.
11. 'It was national patriotism which crushed Napoleon.' Do you agree?
12. Attempt a critical estimate of the Irish policy of the younger Pitt.
13. Tell the story of Parliamentary Reform in the nineteenth century, with special reference to the parts played by Grey, Russell, and Gladstone.
14. Write short notes on any four of the following :—
  - (a) The foreign policy of Canning.
  - (b) Catholic emancipation.
  - (c) Repeal of Corn Laws, 1846.
  - (d) The Chartist movement, 1848.
  - (e) The Midlothian campaigns.
  - (f) Parnell and Home Rule.
  - (g) The 'Grab for Africa.'

## SECOND PAPER

## HISTORY OF GREECE AND ROME

*Candidates are required to give their answers in their own words  
as far as practicable*

*Not more than six questions to be attempted, of which at  
least two must be from each group*

*The questions are of equal value*

## GROUP A

1. Give a brief account of the political organization of the early Greeks as depicted in the Homeric poems.
2. Say what you know about the Olympian games. How did they quicken the consciousness of fellowship among the scattered folks of the Greek race?
3. Compare Lycurgus and Solon as law-givers.
4. Give a brief account of the services rendered to Athens by Miltiades and Themistocles.
5. Examine the claims of Athens to be regarded as the 'instructress of Hellas.'
6. Form an estimate of the character and career of Alexander the Great.

## GROUP B

7. What are the characteristic features of the Roman polity during the regal period?
8. Describe the successive steps by which Rome became the mistress of Italy.

9. Write short notes on any four of the following :—(a) the Decemvirate; (b) the *Lex Hortensia*; (c) Hamilcar Barca; (d) Fabius Cunctator; (e) Battle of Magnesia 190 B.C.; (f) the Social War, 90 B.C.=88 B.C.

10. 'Hannibal was an adept in every art of the soldier and the general.' Do you agree? Account for his failure to conquer Rome.

11. Form an estimate of the work of Tiberius Gracchus.

12. Write a short account of the Roman Empire under either Augustus or Constantine.

## LOGIC

### FIRST PAPER

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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, What benefits does one expect to derive from the study of Logic? 14

*Or*, State and explain the definition of Logic which appears to you to be the most satisfactory.

2. *Either*, Enunciate and briefly explain the fundamental principles of Logic. 14

*Or*, Explain and illustrate the following divisions of terms :—

- (a) Singular and general.
- (b) Distributive and collective.
- (c) Negative and privative.
- (d) Connotative and non-connotative.

3. Give and explain the diagrammatic representations of the propositions A, E, I, and O. State the general rules relating to the distribution of terms in propositions. 14

4. *Either*, Explain the processes of Immediate Inference by Conversion, Obversion, and Contraposition, giving an example of each process. 14

*Or*, Define a dilemma. Explain why dilemmatic reasonings are more often fallacious than not. Rebut the following dilemma :—

If I cross the field I shall meet the bull; and if I go up the lane I shall meet the farmer.

Either I must cross the field or go up the lane.

Therefore either I shall meet the bull or the farmer.

5. *Either*, State and analyse Aristotle's *Dictum de Omni et Nullo*, and show by your analysis that it forms the basis of reasoning in the First Figure. 14

*Or*, What is meant by Opposition of propositions? Draw the Square of Opposition to illustrate your meaning. Give the rules of Immediate Inference by contrary and sub-contrary opposition.

6. *Either*, Prove the following :— 14

(a) If both premisses be affirmative, the conclusion must be affirmative.

(b) The premisses IE can give no conclusion in any figure.

*Or*, If the major term be distributed in the major premiss, and undistributed in the conclusion, determine the mood and figure.

7. Put any four of the following arguments in logical form, and test their validity, mentioning the fallacies (if any) involved in them :— 16

(a) Air is material, for it gravitates like all material things.

(b) If you work hard, you will get a prize. Therefore you must have worked hard, for you have got a prize.

(c) Some poisons are vegetable; no poisons are useful drugs; therefore some useful drugs are not vegetable.

(d) The soul always thinks, inasmuch as to think is its nature as a rational being.

(e) I can afford to buy these books. I can afford to buy these pictures. I can afford to buy these statuettes. The books, the pictures, and the statuettes are all that I at present wish to buy. I can, therefore, buy everything that I want to buy.

(f) I knew he was a Bohemian, for he was a good musician, and Bohemians are always good musicians.

(g) All men have equal rights; therefore if *A* has a right to ten thousands a year, so has *B*.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Name and explain the precise kind of reasoning involved in each of the following :— 15

(a) The sky is overcast with heavy clouds : it will therefore rain.

(b) Most scientists are mathematicians; therefore it may safely be inferred that some mathematicians are scientists.

(c) The captain of a ship is obeyed by everybody on board the ship. Therefore the Prime Minister, who is the captain of the ship of the State, ought to be obeyed by every subject of the State.

(d) Every part of the boundary of this land is washed by the sea : it is therefore an island.

(e) The three angles of this particular triangle *ABC* have been proved to be equal to two right angles : therefore this is true of all triangles.

(f) Being a miser he is unhappy, as all misers are.

2. Either, State the Law of Causation, giving the distinctive marks of the causal relation. Explain and illustrate the distinction between Causes and Conditions. 14

Or, Explain and illustrate any two of the following :—

(a) Composition of Causes and Intermixture of Effects.

(b) Scientific and popular conceptions of Causality.

(c) *Experimentum Crucis*.

(d) Ultimate, Derivative, and Empirical Laws.

(e) Scientific and Illusory Explanation.

3. Explain the nature of Observation and Experiment, and their place in Induction. How does Experiment supplement Observation? 15

4. Enunciate the Method of Agreement. What are its defects, and how are they remedied? 14

5. Name the experimental method on which each of the following arguments is based, giving your reasons :— 14

(a) Two small pieces of blanket, exactly alike in all respects except that one is coloured white and the other black, are placed on a block of ice. After a certain time it is found that the black piece has sunk deeper into the ice than the white one. Therefore it is concluded that black absorbs more heat than white.

(b) A large number of birds have been examined and found to be without teeth. Therefore it is inferred that all birds are without teeth.

(c) A nation becomes more prosperous as it develops in an increasing measure habits of industry and prudence.

(d) One Sunday morning in a poor country parish there appears the surprising phenomenon of a half-sovereign in the offertory; the clergyman knows by repeated experience that none of his flock ever

by any chance gives more than a silver three-penny piece; but he has perceived a stranger in the congregation, and therefore he concludes that he is the donor of the half-sovereign.

6. *Either*, What according to you is the most satisfactory view of the relation of Induction to Deduction? Give your reasons. 14

*Or*, Distinguish Analogy from Induction. On what does the strength of an analogical argument depend?

7. *Either*, Distinguish Hypothesis from Theory. Illustrate the uses of Hypothesis and explain how it aids Induction. 14

*Or*, Explain the distinction between Natural and Artificial Classification. How far is the distinction tenable? State and illustrate the principal rules for the right conduct of scientific classification.

## CIVICS

### FIRST PAPER

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*Candidates are required to give their answers in their own words as far as practicable*

*Any SIX questions to be answered*

*The questions are of equal value*

1. Examine the statement : ' Law is the condition of liberty.'
2. Define and in general terms explain the purposes of the State.

3. Explain the difference between a *natural* and a *naturalized* citizen.
4. What is meant by responsible government? How far is there responsibility in the Government of Bengal?
5. What do you understand by the phrases *freedom of speech* and *freedom of the press*?
6. Describe, as briefly as you can, the functions of a Collector-Magistrate in a Bengal district.
7. Explain the difference between *central* and *provincial* subjects in the system of government at present in force in India.
8. Give a short outline of the constitution of the Calcutta Municipality.
9. Write a short essay on manhood suffrage, as applicable to India.
10. What are the functions of the following bodies?—
  - (a) The Public Service Commission, India.
  - (b) The Board of Revenue, Bengal.
  - (c) The Calcutta Port Commission.

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## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*The questions are of equal value*

1. 'Economics is the study of mankind in the ordinary business of life.' Explain.  
Define the term 'Economic Laws.'
  2. Mention the advantages of the different forms of division of labour.
  3. 'Bad money always drives good money out of circulation.' Name and explain the law. How does the good money disappear?
  4. What is a Trade Union? What are the effects of Trade Unions on wages?
  5. Mention the advantages of large scale production. Can a small producer hold his own in the presence of large scale manufacturers in modern times?
  6. Explain the term 'budget.' What do you mean by a deficit budget? How can deficit in budget be ordinarily made good? Refer, if possible, to the financial condition of the province of Bengal.
  7. Give a brief account of India's mineral resources.
  8. Illustrate the influence of the prevailing social and religious customs on the economic life of the people of India.
  9. Discuss the economic consequences of a general and prolonged fall of prices in an agricultural country like India.
  10. What are the various factors that determine the rate of interest paid by (a) the Government of India on its public borrowings, (b) the Indian ryots on their loans from local money lenders, and (c) the members of rural co-operative credit societies on their loans from these societies?
-

## COMMERCIAL GEOGRAPHY

## FIRST PAPER

<b>Paper-Setters—</b>	{	DR. HARISCHANDRA SINHA, M.Sc., PH.D.
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		DR. NALINIMOHAN PAL, PH.D.
<b>Examiners—</b>	{	MR. ANILKUMAR CHANDRA, B.Sc. (Lond.).
		„ PRAMATHES RAY, M.A.
		„ HEMANTAKUMAR SEN, M.A.
		„ SACHINDRANATH SENGUPTA, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer the FIRST question and any FIVE of the rest*

*The figures in the margin indicate full marks*

1. Draw a map of Great Britain, showing the principal ship-building centres. 20
2. Write a short essay on the effect of climate on manufacturing industries. 16
3. State the climatic conditions under which sugar beet and sugar cane are grown, and name five important sugar-producing countries of the world. 16
4. State five important grasslands of the world, describing the climate and production of each. 16
5. Name any four countries where waterpower is principally used. Explain the special circumstances in each country favouring its use in preference to other forms of power. 16
6. Discuss the geographical distribution of iron and steel industry in post-war Germany. Compare the position in Germany with that in England in this respect. 16
7. Give an account of (a) the natural resources, and (b) the climatic conditions of Japan, and show how they have affected her development. 16
8. State the precise situation and describe the reasons for the importance of any five of the following :—(a) Alexandria, (b) Durban, (c) Marseilles, (d) New Orleans, (e) Shanghai, (f) Sydney, and (g) Vancouver. 16

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer the FIRST question and any FIVE of the rest*

*The figures in the margin indicate full marks*

1. Draw a map of India, showing her principal mineral resources. 20
2. Name five important oil-seeds of India, describing the areas where they are grown and the uses to which they are put. 16

3. What are the chief areas in India where tobacco and silk are produced? Describe the climatic conditions which favour their growth. 16
4. What are the causes for the localization of the jute manufacturing industry in Bengal? 16
5. Write a short essay on the foreign trade of India, stating (a) the imports and their sources, and (b) the exports and their destination. 16
6. Distinguish between the monsoonal and Mediterranean types of climate. How do the monsoons affect the economic condition of India? 16
7. Describe the railway system of India, and show how the railways connect the principal producing and consuming areas. 16
8. Account for the importance of the following places :—(a) Allāhabad, (b) Moradabad, (c) Poona, (d) Dehra Dun, (e) Agra, and (f) Vizagapatam. 16

## COMMERCIAL ARITHMETIC AND ELEMENTS OF BOOK-KEEPING

### FIRST PAPER

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*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any SEVEN questions*

*The questions are of equal value*

1. (a) A trading concern in the first year made a profit of Rs. 1,875 on a turnover of Rs. 23,500; and in the second year a loss of Rs. 710 was sustained on a turnover of Rs. 22,360; while in the third year a profit of Rs. 935 was made on a turnover of Rs. 24,140. What was the average profit per cent. on the three years' turnover?

(b) At an election a candidate polled  $6\frac{1}{2}$  per cent. less than his opponent, who obtained 2,160 votes. How many votes were given for the unsuccessful candidate?

2. (a) What premium at 3 per cent. will be paid for insuring a ship worth Rs. 12,000? What sum must it be insured for so that in case of loss the value of the ship and the premium may be recovered?

(b) A ship worth Rs. 18,000 is wrecked; one-eighth belonged to A, one-quarter to B, and the rest to C. Find what loss each of them will sustain if the ship is insured to the extent of three-fifths of its value.

3. One firm, A, offers to pay carriage on all goods bought at cash price, while another, B, in the same place, gives a discount of  $\frac{1}{4}$ d. in the shilling but pays no carriage. If I reside 20 miles away and desire to purchase 3 cwt. of a certain article at  $4\frac{1}{4}$ d. per lb., which firm ought I to go to, the carrier's charge being at the rate of 1s. 8d. per cwt. for a distance of 20 miles?



4. (a) Make out the following invoice with appropriate heading, date, &c., and complete the necessary calculations to the nearest anna :—

1,000 envelopes at  $7\frac{1}{2}$  a. per 100; 20 order books at  $11\frac{1}{2}$  a. each;  $7\frac{1}{2}$  dozen pencils at  $1\frac{1}{2}$  a. each; 1 gross pen nibs at 6 for 1 a.; 17 reams foolscap at 6 a. per quire.

(b) The cost of carpeting a room, whose length is twice its breadth, at Rs. 8-12-0 per square yard, was Rs. 187-8-0. Find the dimensions of the room.

5. (a) During the year 1932 the bank rate was as follows :—6 per cent. for one week, 5 per cent. for one week,  $4\frac{1}{2}$  per cent. for one week, 4 per cent. for seventeen weeks,  $3\frac{1}{2}$  per cent. for three weeks, 3 per cent. for five weeks, and 4 per cent. for twenty-four weeks. What was the average rate during the year?

(b) The average dividend paid during eight years by a company is 3-8125 per cent. The dividends paid for the first seven years were respectively  $3\frac{1}{2}$ ,  $3\frac{1}{4}$ ,  $3\frac{1}{2}$ , 4,  $4\frac{1}{2}$ ,  $4\frac{1}{4}$ , 4 per cent. What was the dividend for the eighth year?

6. (a) What was the prime cost of an article which on being sold at a gain of  $7\frac{1}{2}$  per cent., yields Rs. 4-11-0 more than if it were sold at a loss of  $12\frac{1}{2}$  per cent.?

(b) If the manufacturer makes a profit of 20 per cent., the wholesale dealer a profit of 25 per cent., and the retailer a profit of 40 per cent., what was the cost of the manufacture of an article bought at the shop for Rs. 350?

7. Having invested a sum of money in  $2\frac{1}{2}$  per cent. Consols at 60 $\frac{3}{4}$  I held the stock until I had received a half-year's dividend. I then sold it at 60 $\frac{3}{4}$ , and invested the proceeds of the sale, together with the dividend, so as to produce  $4\frac{1}{2}$  per cent., and my income was thus improved by £90. 19s. 6d. per annum. If brokerage of one-eighth per cent. be charged upon sales and purchases, what sum did I originally invest?

8. I buy in London £1,000 worth of Berlin bills at 20-53 reichsmarks to the £ and transmit them to Paris to be sold at 100 reichsmarks for 625-5 francs. In return I receive bills of two months' date at 125-22 francs to the £. Is the operation profitable? (Discount 3 per cent., brokerage 1 per 1,000, and commission one-eighth per cent.)

9. Three men A, B, C go into business, A contributing Rs. 5,000 B Rs. 3,000, and C Rs. 2,500, of the capital on the understanding that, after allowing one-eighth of the profits to C as manager, the remainder should be divided amongst them all in proportion to the amount of capital contributed by each. At the end of the year C received Rs. 280. What were the total profits of the business, and how much did A and B receive respectively?

10. What is the present value of Rs. 1,000 due in two years at 5 per cent. per annum compound interest, according as the interest is paid (a) yearly, or (b) half-yearly?

11. What do you understand by banker's discount and true discount? If the difference between the true discount and the banker's discount on a sum, due in four months at 3 per cent., is Rs. 10, find the amount of the bill.

12. The liabilities of a bankrupt were Rs. 1,36,000 and his assets were estimated at Rs. 97,500. The creditors received a first dividend of 0-8-0 in the rupee. On being wound up the assets realized only 85 per cent. of the estimated amount; and the legal expenses and the payments of preferential claims together absorbed  $12\frac{1}{2}$  per cent. of the sum realized. What additional amount in the rupee should the creditors receive? What total sum should a creditor for Rs. 27,500 receive, assuming he has no preferential claim?

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer Question B and any FIVE other questions*

*The questions are of equal value*

1. Explain the following commercial terms and abbreviations :—

Account Sales, Ad Valorem, Annuity, Bank Rate, Bill of Lading, Days of Grace, Dividend, Floating Charge, Letter of Regret, Liquid Assets, Rebate, Telegraphic Transfer, D/A, F.A.S., I.O.U., E. & O.E.

2. (a) What is a Cash Book? Explain the forms of (i) the Single Column Cash Book, (ii) the Double Column Cash Book, and (iii) the Three Column Cash Book.

(b) From the following particulars compile the Cash Book of H. P. Banerji (ruling the necessary form), and bring down the closing balance of Cash on hand as on January 31, 1933 :—

	Rs.
Jan. 1. Cash in hand	1,000
2. Received from J. Mitra—Interest on Loan	200
3. Paid to Dutt & Co. for stationery	17
4. Paid for Electric Light to December 31, 1932	21
5. Paid for Goods	219
6. Received Advance from S. Roy	500
8. Received for old materials sold	81
9. Received from J. Mitra—Principal	1,000
15. Lent R. Banerji	1,500
21. Paid for postage and telegrams	17
31. Salary paid to Staff	175

3. Rule a form of Petty Cash Book containing analysis columns for the following kinds of petty cash expenditure, viz., Stationery, Postages, Telegrams, Carriage, Travelling Expenses, Cleaning, Lighting, Firing, together with a column for such payments as require to be posted direct to the Ledger.

Enter the following transactions, bringing down the balance on hand at the conclusion, and showing how the expenditure is recouped by the Petty Cashier from time to time :—

	Rs. A. P.
1933	
Mar. 1. Received Cash from Chief Cashier	50 0 0
Paid for Postages	0 4 6
" " Telegrams	0 13 0
2. " " Electric Bill	5 7 0
3. " " Dyeing Co. for cleaning	0 15 6
" " Coal for Firing	1 8 0
4. " " Fares to Midnapore	6 5 0
6. " " Carriage of samples sent	0 18 6
" " Postages	0 14 9
" " Telegram to London	13 8 0
7. " " New Copying Press (Debit Furniture Account)	20 0 0
" " Postages	1 7 0
" " Bus fares	0 4 0
10. " " Typewriting paper	1 9 0

4. Write up, in the books of both parties, the ledger accounts (including cash) for the following transactions in bill :—

On July 1 S. Sarkar accepts a three months' bill for Rs. 1,500, drawn on him by G. Basu for the latter's benefit. Basu discounts the bill at the rate of  $3\frac{1}{4}$  per cent, per annum, and at maturity forwards Sarkar a cheque with which to meet the bill.

5. What is a Journal? Give illustrations. Is the Cash Book a Journal?

The following balances, extracted from a trader's Trial Balance on December 31, 1932, are to be transferred to the Trading and Profit and Loss Accounts through the Journal; a reserve of Rs. 200 is to be raised to cover the estimated loss in realization of Book Debts; the Closing Stock amounted to Rs. 1,500. The closing balance of Profit & Loss Account is to be transferred to the Capital Account.

Opening Stock	...	...	2,600
Purchases	...	...	10,400
Sales	...	...	13,460
Returns Inwards	...	...	100
Salaries and Wages	...	...	1,050
General Expenses	...	...	250
Rent, Rates, and Taxes	...	...	150

6. (a) Define Depreciation. What entries are necessary in the books when an asset is depreciated?

(b) Machinery is bought for Rs. 3,000. Its life is estimated to be six years, and its break-up value at the end of this period Rs. 534. Show the Machinery Account for the six years, writing off depreciation at a fixed rate per cent. on the diminishing or reducing value of the asset.

7. J. Ray & Co. of Calcutta consign goods to the cost amount of Rs. 15,000 to their agent, M. Kimura of Hong Kong, on which they pay freight, insurance, and charges Rs. 550, drawing on him at 90 days for Rs. 13,000. They discount the bill at the Bengal Central Bank of India, Ltd., being charged Rs. 150 therefor. They receive Account Sales of the consignment for Rs. 17,290, less Agent's commission, etc., Rs. 710, and a draft on the Hong Kong Shanghai Banking Corporation for the balance.

Record the above transactions in the books of J. Ray & Co.

8. From the following balances of Sikdar & Sons, prepare Trading and Profit & Loss Accounts for the year ended March 31, 1933, and a Balance Sheet as on that day:—

Rs.		Rs.	
Stock and Work in progress,		Sales	...
Apr. 1, 1932	...	Received for Cartage	...
Materials Purchased	...	Partners' Capital, April, 1,	...
Wages	...	1932—	
Trade Charges	...	J. Sikdar	...
Salaries	...	H. Sikdar	...
Partners' Salaries	...	R. Sikdar	...
Cash at Bank	...	Creditors	...
Discounts	...	Bills Payable	...
Land and Buildings	...		
Plant and Tools	...		
Office Furniture	...		
Debtors	...		
Cash in hand	...		
Drawings—			
J. Sikdar	...		
H. Sikdar	...		
R. Sikdar	...		
	1,03,840		1,08,840

The Stock and Work in progress on March 31, 1933, was Rs. 12,000.

Provide 10 per cent. per annum for depreciation of Plant and Tools, and Office Furniture.

The partners share Profits and Losses equally, but are entitled to 5 per cent. Interest on Capital per annum.

9. (a) What is meant by 'goodwill' in a partnership? When is goodwill brought into the books?

(b) D. Dutt and G. Ghosh are in partnership, sharing profits and losses two-thirds and one-third respectively. They agree to admit B. Banerji as a partner on condition that he brings in Rs. 18,000, Rs. 2,400 of which is to be regarded as premium for goodwill; the money, however, is to remain in the business. Make the necessary entries in the books.

10. (a) What is a company? What are the maximum and minimum number of members (i) for a private company, and (ii) for a public company?

(b) Mention the principal points of difference between a company and a partnership.

(c) A limited company issued 20,000 ordinary shares of Rs. 10 each payable Re. 1-8-0 on application, Rs. 3-8-0 on allotment, and Rs. 2-8-0 on each of two subsequent calls; also Rs. 1,00,000 debentures at a premium of 5 per cent. All the shares and debentures were taken up by the public and all the money was duly received. Make the necessary Journal and Cash Book entries, and exhibit a Trial Balance and Balance Sheet.

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## GROUP A

*Answer Question 5, and any two of the remaining four questions of this group*

1. Prove that a quadratic equation cannot have more than two roots. 5  
Find the condition that the roots may be real. Is it possible for a 1  
quadratic equation to have one real and one imaginary root? 1

If  $\alpha, \beta$  be the roots of the equation

$$ax^2 + bx + c = 0,$$

find the equation whose roots are  $\alpha^2$  and  $\beta^2$ . 5

2. (i) Find the sum to  $n$  terms of the series 6

$$1^3 + 2^3 + 3^3 + \dots$$

- (ii) Show that a real value of  $x$  will satisfy the equation 6

$$\frac{1-ix}{1+ix} = a-ib,$$

if  $a^2 + b^2 = 1$ ,  $a$  and  $b$  being real and  $i$  denoting  $\sqrt{-1}$ .

3. Find the number of combinations of  $n$  different things taken  $r$  at a time 5  
How would the result be affected if two of the things were exactly 2  
similar?

In a municipal corporation there are 20 councillors and 8 aldermen. 5  
How many committees can be formed consisting of 5 councillors and 3  
aldermen?

4. Prove the Binomial Theorem for a positive integral index. 7

If  $(1+x)^n = c_0 + c_1x + c_2x^2 + \dots + c_nx^n$ , 5

prove that

$$c_0^2 + c_1^2 + c_2^2 + \dots + c_n^2 = \frac{(2n)!}{n!n!}.$$

5. (i) Expand  $\log(1+x)$  in a power series in  $x$ . Is the expansion 5,1  
valid for all values of  $x$ ?

(ii) If

$$y = x + x^2 + 2x^3 + \dots + \frac{(2n)!}{n!(n+1)!} x^{n+1} + \dots \text{ad inf.} \quad 3$$

prove that

$$y^2 - y + x = 0.$$

## GROUP B

Answer Question 8 and ONE of the remaining two questions in this group

6. (i) Prove the formula 6

$$\sin(A+B) = \sin A \cos B + \cos A \sin B.$$

- (ii) Prove the identities

$$(1) \cos^2 A + \cos^2 \left( A + \frac{\pi}{3} \right) + \cos^2 \left( A - \frac{\pi}{3} \right) = \frac{3}{2}, \quad 3$$

- (2)  $\sin 2A + \sin 2B + \sin 2C = 4 \sin A \sin B \sin C$ ,  $A, B, C$  being the angles of a triangle. 3

7. (i) Prove that the area of a triangle is given by the formula 5

$$S = \sqrt{s(s-a)(s-b)(s-c)},$$

where  $2s = a + b + c$ .

- (ii) If  $a = 39$ ,  $A = 81^\circ 35'$ ,  $B = 27^\circ 55'$ , solve the triangle (Mathematical Tables supplied). 7

8. (i) Draw the graph of  $y = \tan x$ ,  $x$  lying between 0 and  $2\pi$ . 7

- (ii) Solve the equation 7

$$\sin \theta + 2 \cos \theta = 1,$$

## GROUP C

Answer any two questions out of this group

9. Prove that the square of the ordinate of any point on a parabola is equal to the rectangle contained by the latus rectum and the abscissa of the point. 7

$PQ$  is drawn perpendicular to  $AP$ , a chord passing through the vertex  $A$  of a parabola,  $Q$  being the point on the axis. If  $PN$  be the ordinate, show that  $NQ$  is equal to the latus rectum. 5

10. Prove that the tangent at any point of a parabola bisects the angle which the focal distance of the point makes with the perpendicular drawn from the point on the directrix and conversely. 7

Hence, or otherwise, prove that if  $PSp$  be a focal chord, the tangents at  $P, p$  intersect at right angles on the directrix. 5

11. Prove that the portion of the tangent to an ellipse at any point intercepted between that point and the directrix subtends a right angle at the focus and conversely. 7

The ordinate  $PN$  of a point  $P$  on the ellipse is produced to meet the tangent at the end of a latus rectum at  $Q$ . Show that the distance of the point  $P$  from the corresponding focus is equal to  $QN$ . 5

12. Prove that the middle points of a system of parallel chords of an ellipse lie on a straight line passing through the centre. 9

Given an ellipse, find its centre. 3

## GROUP D

*Answer ONE question out of this group*

13. Prove that all straight lines perpendicular to a given straight line at a given point in it lie in a plane which is perpendicular to the given straight line. 7

Prove that a point can be found in a plane equidistant from three given points outside the plane. State the exceptional case if any. 5

14. Prove that if a straight line outside a plane is parallel to a straight line in the plane, it is parallel to the plane itself. 7

If a straight line is parallel to each of two planes, prove that it is parallel to their line of intersection. 5

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicates full marks*

*Full credit will be given for answers to Questions 3 and 10 (starred) and FIVE of the others. Not more than FOUR questions from either group may be attempted*

## GROUP A

1. Enunciate and explain clearly the *triangle of forces*. 7

A small ring is placed at the centre of a regular hexagon and kept in position by six strings drawn tight, all in the plane of the figure, and each fastened at the other end to an angular point of the hexagon. The tensions in four consecutive strings are 2, 7, 9 and 6 lb. weight respectively. Find the tensions in the two remaining strings. 7

2. Define the moment of a force, and explain how it can be represented geometrically. 2

Prove that the algebraical sum of the moments of two forces acting at a point about any point in their plane is equal to the moment of the resultant about the same point. 5

A narrow uniform plank 20ft. long weighing 100 lb. is supported in a horizontal position on two posts, one 5 ft. from one end and the other 8ft. from the other end of the plank. A boy weighing 60 lb. walks on it starting from the latter post towards the corresponding end. Find how far it is safe for him to walk. What are the reactions of the posts when he is farthest from the starting-point without upsetting the plank? 7

\*3. Find the conditions of equilibrium of a set of coplanar forces acting on a body. Is any modification of the conditions necessary when frictional forces are introduced? 7

A uniform ladder of weight  $w$  rests on rough horizontal ground and against a smooth vertical wall inclined at an angle  $\alpha$  to the horizon. Prove that a man of weight  $W$  can climb to the top of the ladder without the ladder slipping if 7

$$\frac{w}{W} > \frac{2(1 - \mu \tan \alpha)}{2\mu \tan \alpha - 1},$$

$\mu$  being the coefficient of friction.

4. Find the centre of gravity of a uniform lamina of the shape of a parallelogram. 6

A boy cuts out from a sheet of thin uniform pasteboard a figure composed of a semicircle and a square on its diameter on the opposite side. If he wants to balance it on a needle, find where the point of the needle is to be placed. 8

5. Explain clearly what is meant by the work done by a force and power. 6

A locomotive draws a train weighing 200 tons along a level track at a speed of 40 miles per hour, the resistance amounting to 10 lb. per ton. What horse power is it exerting? Find also the horse-power necessary to draw the train at the same speed up an incline of 1 in 200 8

6. Define the mechanical advantage of a machine. Draw a neat diagram of the first system of pulleys, and calculate the mechanical advantage, neglecting the weights of the pulleys. 1 6

It is required to lift a weight of 10 cwt. with 4 pulleys each weighing 8 lb. Would you prefer the first or the second system as being more advantageous? 7

### GROUP B.

7. Prove the formula 7

$$s = ut + \frac{1}{2}ft^2$$

for a particle moving under uniform acceleration  $f$ .

A railway train moves with uniformly increasing speed for the first 8 minutes after starting and travels a distance of one mile during the time. What is the speed attained, and how far does it move in 2 minutes? 7

8. Prove that for a particle thrown vertically upwards, the time of rise is equal to the time of fall. 6

A stone dropped into an empty pit of depth  $h$  is heard to strike the bottom after  $t$  seconds. Prove that 8

$$2h \left( 1 + \frac{gt}{V} \right) = gt^2,$$

where  $V$  is the velocity of sound supposed so large compared with  $h$  that  $(h/V)^2$  can be neglected.

9. Define momentum, and explain how it is connected with force. 4

Two unequal masses  $m_1$  and  $m_2$  are connected with a string passing over a fixed pulley. Find the motion, the weight of the string and the friction of the pulley being negligible 5

A lift has an upward acceleration of  $3 \cdot 2$  ft. per (sec.)<sup>2</sup>. What pressure will a man weighing 140 lb. exert on the floor of the lift? 5

\*10. Find the greatest horizontal range of a particle projected with velocity  $u$ . 7

A gun is mounted on a cliff of height  $h$  above the sea-level. If  $u$  be the muzzle velocity of the shot, prove that the maximum range  $d$  at sea-level measured from the foot of the cliff is 8

$$d = \frac{u}{4} \left( h + \frac{u^2}{64} \right)^{\frac{1}{2}},$$

and the angle of projection  $\alpha$  is given by

$$\tan \alpha = u^2/32 d,$$

$g = 32$  ft./ (sec.)<sup>2</sup>.

11. Two spheres of masses  $m, m'$ , moving in the same direction with velocities  $u, u'$  respectively, impinge on each other. Given the coefficient of restitution, find the motion after impact. 4

A ball at rest is struck obliquely by a similar ball. Show that if they are perfectly elastic, their subsequent paths are at right angles. 7

12. Verify that for a heavy particle thrown vertically upwards, the sum of the kinetic and potential energies is always constant. 7

A shot of mass 100 lb. moving at 1,600 feet per second strikes a fixed target. How far will the shot penetrate the target, assuming that it offers an average resistance of the weight of 12,000 tons?



## PHYSICS

## FIRST PAPER

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,, DHRUBAKUMAR PAI, M.A.  
,, JITENDRANATH CHAKRABARTI, M.Sc.  
,, SAILAJARANJAN RAY, M.Sc.  
,, KAILASCHANDRA CHAKRABARTI, M.Sc.  
,, NAGENDRANATH BASU, M.Sc.  
,, HARAPRASAD DE, M.Sc.  
,, SATYENDRANATH RAY, M.Sc.  
,, PURNACHANDRA MAHANTI, M.Sc.  
,, TRIBHANGAMURARI MANDAL, M.Sc.  
,, APURBACHANDRA NAG, M.Sc.  
,, AMARENDRANATH BANERJEE, M.Sc.  
,, SANATKUMAR BANERJEE, M.Sc.

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt six questions, of which at least two must be from each of the GROUPS A and B and one from GROUP C*

## GROUP A

1. What is meant by 'acceleration of gravity'? How do you prove that it varies from place to place on the earth's surface? How does it vary?

2. Define the angular velocity of a body moving uniformly in a circle. Find its periodic time.

Show that the foot of the perpendicular drawn from the body to a fixed diameter of the circle describes a Simple Harmonic Motion and hence define such a motion.

3. Describe a Nicolson's hydrometer, and explain how you would determine the specific gravity of a liquid with its help.

1 c.c. of lead (sp. gr. 11.4) and 21 c.c. of wood (sp. gr. 0.5) are fixed together. Show whether the combination will float or sink in water.

4. Describe an air pump and explain its action.

## GROUP B

5. How would you determine the coefficient of increase of pressure of a gas at constant volume? How is it related to the volume coefficient?  
100 c.c. of air are measured at 20° C. If the temperature be raised to 50° C., what will the volume be, the pressure remaining constant?
6. Describe a dew-point hygrometer and explain its action.  
What use is made of this instrument in weather forecasting?
7. Describe experiments to show that radiant heat and light are identical in nature.
8. Describe, with a neat diagram, any form of a modern petrol engine. How does it act?

## GROUP C

9. Describe the human ear, and explain how sound is perceived.
10. Explain the formation of the beats heard when two tuning forks which are not quite in unison are sounded together.  
A standard fork *A* has a frequency of 256 vibrations, and when a fork *B* is sounded with *A* there are four beats per second. What further observation is required for determining the frequency of *B*?

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt six questions, of which at least two must be from each of the GROUPS A and C and one from GROUP B*

*The questions are of equal value*

## GROUP A

1. Prove the formula

$$\frac{1}{u} + \frac{1}{v} = \frac{2}{r},$$

connecting the position of the object and the image formed by reflexion at a concave spherical mirror.

Trace the changes in the position of the image and in its magnification as the object moves from a considerable distance close up to the mirror.

2. Explain clearly how you would experimentally determine the focal length of a concave lens. A double convex lens has a focal length of 8 cm. and an object is placed 6 cm. from the lens.

- (a) How far is the image from the lens?
- (b) How does the image compare in size with the object?
- (c) What is the nature of the image?

3. (a) A clean platinum wire is gradually heated in a non-luminous Bunsen flame and observed through a spectroscope. State what you observe.

(b) Explain why a pool of water seems to be less deep than it actually is.

(c) Give a short description, with a neat diagram, of the direct vision spectroscope.

4. Describe the Galilean telescope and trace the path of the rays through it when the telescope is directed towards a distant object and adjusted for normal vision.

### GROUP B

5. Trace the lines of force surrounding a bar magnet when the magnet is placed along the magnetic meridian with the north pole pointing north.

How are the lines of forces of a magnet altered when a ring of soft iron is placed in its field?

Describe how you would find in the laboratory the positions of the poles of a bar magnet.

6. Define specific inductive capacity. Explain how Faraday determined the fact that different substances have different specific inductive capacities.

7. Explain the following :—unit pole, declination, potential, equipotential surface, and magnet moment.

Two conductors of capacity 20 and 30 respectively are connected by a fine wire and a charge of 100 units is communicated to them. Find the potential and charges on the conductors.

### GROUP C

8. Describe a storage cell. What is its E.M.F.? How would you measure such an E.M.F.?

The E.M.F. of a cell is 1.5 volts and its internal resistance is 0.07 ohm. What resistance should be added to give a current of 5 amperes?

9. Describe a Post Office box and explain the theory of Wheatstone's Bridge with its help. Show how it is used to determine an unknown resistance.

A current of 10 amperes produces a deflexion of  $45^\circ$  in a tangent galvanometer. What is the value of the current which will produce a deflexion of  $30^\circ$  in the same galvanometer?

10. State Lenz's law and apply it to explain the production of electrical currents by induction. Show that it follows from the principle of conservation of energy.

11. (a) A 10 ohm coil of wire is used to heat 1,000 gm. of water from  $25^\circ \text{C.}$  to  $75^\circ \text{C.}$  in 10 minutes. How much current must be used?

(b) What is the joint resistance of five electric lamps of 250 ohms each when connected in parallel?

(c) How many Joules of energy are consumed when a 40 watt lamp burns for 10 minutes?

12. Describe briefly what happens when an electric discharge is passed through a vacuum tube in which the pressure is being gradually reduced. How do you prove that the discharge from the cathode consists of charged particles?

## CHEMISTRY

## FIRST PAPER

*Paper-Setters*— { PROF. J. N. MUKHERJEE, M.A., D.Sc.  
 { MR. RAJENDRANATH SEN, M.A., M.Sc.  
 { PROF. H. K. SEN, M.A., D.Sc.

*Head Examiner*—PROF. HEMENDRAKUMAR SEN, D.Sc.

*Examiners*— { MR. SARATCHANDRA CHATTERJEE, M.Sc.  
 { „ SATISCHANDRA MUKHERJEE, M.A.  
 { „ RADHAKISHEN DAS, M.Sc.  
 { „ UMAPATI BAJPAI, M.A.  
 { „ HARIDAS BANERJEE, M.Sc.  
 { „ BRAJAGOPAL MITRA, M.Sc.  
 { „ SANTOSHKUMAR BANERJEE, M.Sc.  
 { „ MANINDRANATH SINHA, B.A.  
 { „ BANKUBIHARI PANDIT, M.A.  
 { „ KSHIRODMOHAN SEN, M.A.  
 { „ ASWINIKUMAR GUHA, M.Sc.  
 { „ DHIRENDRACHANDRA RAY, M.Sc.  
 { „ INDUBHUSHAN SARKAR, M.Sc.  
 { „ KHAGENDRANATH BERA, M.Sc.  
 { „ NARENDRACHANDRA DEB, M.Sc.  
 { „ SURENDRAKUMAR MAJUMDAR, M.Sc.  
 { „ DHIRENDRAMOHAN MUKHERJEE, M.Sc.  
 { „ SAILENDRALAL MITRA, M.A.  
 { „ RAMANIMOHAN RAY, M.Sc.  
 { „ RABINDRANATH GUHA, M.A.  
 { „ GOPALCHANDRA BANERJEE, M.Sc.  
 { „ NISANATH CHAKRABARTI, M.Sc.  
 { „ NALINCHANDRA CHATTERJEE, M.Sc.  
 { „ HARENDRANATH GUPTA, M.Sc.  
 { DR. SATYAPRASAD RAYCHAUDHURI, D.Sc.  
 { MR. DHIRENDRANATH SARKAR, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*Any SIX questions, of which Question 8 must be one, carry full marks*

*The questions are of equal value*

1. What is meant by the term 'combustion?' Describe experiments to show (a) that combustion may take place in the absence of oxygen, (b) that the terms 'combustible' and 'supporter of combustion' are interchangeable.

2. Explain and illustrate the following:—efflorescence, sublimation, dissociation, electrolysis, allotropy, acid salt.

3. What are the chief constituents of air? How would you determine the proportion in which they exist in air? State the reasons for considering air to be a mixture and not a compound.

4. Describe the preparation, properties, and uses of hydrogen peroxide. How is it distinguished from ozone?

5. By what metals and under what conditions is water decomposed with liberation of hydrogen? What are the uses of hydrogen? What is 'nascent' hydrogen and what are its properties?

6. What happens when—

- (a) copper powder is thrown into an atmosphere of chlorine;
  - (b) phosphorus is lowered into a jar containing oxygen;
  - (c) to a ferrous sulphate solution, concentrated sulphuric acid containing traces of nitric acid is carefully added;
  - (d) nitrous oxide is passed over heated metallic sodium?
- Give equations in each case.

7. What are the chief minerals containing phosphorus? How is it prepared and for what purposes is it used? Name its allotropic modifications, stating how one is converted into the other. What happens when phosphorus is boiled with caustic soda solution?

8. Ten grams of iron wire were placed in 150 c.c. of hydrochloric acid containing 30 grams of hydrogen chloride. Calculate (a) the volume of hydrogen evolved, measured at 19°C. and 750 mm. pressure; and (b) the weight of acid left at the end of the reaction.

$$[\text{Fe}=56, \text{Cl}=35.5.]$$

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Any six questions, of which Question 8 must be one, carry full marks*

*The questions are of equal value*

1. Describe in full how sulphuretted hydrogen is usually prepared in the laboratory, giving a neat sketch of the apparatus used.

State its properties and uses as an analytical re-agent.

2. What is meant by the 'temporary' and the 'permanent' hardness of water? To what is the hardness due and how may it be removed? What is the action of hard water on soap?

3. How is anhydrous hydrofluoric acid prepared? By what means did Moissan prepare fluorine from this substance? Compare the properties of fluorine with those of chlorine.

4. How would you prove that (a) oxygen is a constituent of water, (b) chlorine is a constituent of common salt, (c) carbon is a constituent of marble, (d) nitrogen is a constituent of nitric acid, (e) diamond is nothing but carbon?

5. Name the important ores of zinc, and describe any method used for its extraction. What are its principal properties and uses? Write what you know about 'galvanizing.'

6. Explain, with equations, what happens when—

- (a) tin is heated with concentrated nitric acid;
- (b) copper is heated with concentrated sulphuric acid;
- (c) manganese dioxide is heated with concentrated hydrochloric acid;
- (d) chlorine is passed into boiling milk of lime;
- (e) dry slaked lime is acted upon by chlorine;
- (f) sulphuretted hydrogen gas is passed into an acid solution of zinc chloride.

7. How are the following substances obtained and what are their uses : lime, alum, calomel, ded lead?

8. State (a) the laws of chemical combination by weight and by volume, (b) Avogadro's hypothesis.

Calculate the composition by volume of a mixture of carbon monoxide and methane, 10.5 c.c. of which required 9 c.c. of oxygen for complete combustion.

## GEOGRAPHY

### FIRST PAPER

MR. SARATCHANDRA MAJUMDAR, M.A.,

F.R.G.S.

Paper-Setters—

„ HEMCHANDRA DASGUPTA, M.A., F.G.S.

{ „ K. ZACHARIAH, M.A.

Examiners— { MR. KUMUDCHANDRA RAYCHAUDHURI, M.A.  
 „ SANTOSHKUMAR RAY, M.Sc.

*Candidates are required to give their answers in their own words as far as practicable*

*Six questions are to be attempted. Question 1 is obligatory*

*The figures in the margin indicate full marks*

1. 'A mountain may be a barrier; a river is only a link.' Discuss this with reference to Asia. 20
2. Show how the geographical environment has determined the conditions of life of *either* the Eskimo *or* the Bedouin. 16
3. Explain briefly the causes which have made the following places important :—Liverpool, Constantinople, Alexandria, Durban, Karachi, Chicago, and Paris. 16
4. Describe with a map the river system of North America, and show how it has influenced the development of the country. 10
5. What are the geographical reasons which have made England a mainly industrial country? What are its chief industries and where are they carried on? 16
6. Explain the main physical features and climate of Burma, and show their relations to its chief products. 16
7. What parts of the British Empire produce (a) sugar, (b) cocoa, (c) raw wool, and (d) jute, and why? 16
8. Account for the density of population in China and for the sparseness of population in Australia. 16
9. Draw a map of India and indicate on it all the important railway systems. 16

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Six questions are to be attempted. Question 1 is obligatory*

*The figures in the margin indicate full marks*

1. Draw a map of the Indian Ocean. Give an account of the oceanic deposits, with special reference to the Indian Ocean, and state what you know regarding the temperature and salinity of the Bay of Bengal. 20
  2. Explain how the *trade winds* are caused and discuss the effects produced by them. 16
  3. What are the various ways in which mountains and valleys have been formed? Illustrate your answer with Indian examples. 16
  4. What are the *isothermal* and the *isobaric* lines? 16
    - (a) Do their directions alter in the northern hemisphere from winter to summer?
    - (b) Does an isotherm coincide in direction with a parallel of latitude?

Give reasons for your answers.
  5. What are the chief causes that influence the climate of any place? Illustrate your answer with reference to the varieties of climate observed in India. 16
 

Are the climatic conditions of eastern Canada very different from those of the lands of western Europe lying within the same latitudes? Give reasons for your answer.
  6. Compare Eurasia and North America with reference to structure, drainage, and coast-line. 16
  7. Distinguish clearly between a *cyclone* and an *anti-cyclone*. 16
 

Describe any cyclone which has passed over Bengal during recent times and mark its track carefully.
  8. What are the characteristic features of deltaic regions? Illustrate your answer by examples from Asia. 16
  9. Give an account of the different minerals found in the various parts of India, and point out their significance from an industrial point of view. 16
-

## PHYSIOLOGY

## FIRST PAPER

<i>Paper-Setters</i> —	{	SIR NILRATAN SIRCAR, KT., M.A., M.D., LL.D., D.C.L.
		DR. GIRINDRASEKHAR BOSE, D.Sc., M.B.
		PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc., F.R.S.E.
<i>Examiners</i> —	{	MR. SUNILCHANDRA SEN, M.Sc.
		„ PARIMALBIKAS SEN, M.Sc.

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*All questions carry equal marks*

1. What are the signs of life? How would you distinguish a living from a dead object?
2. Describe briefly the different types of joints found in the human body, mentioning *one* example of each.
3. How many different types of cartilage are there in the human body? Describe briefly the microscopic structure of each.
4. Describe the composition and general properties of blood.
5. How is respiration carried out? Describe its mechanical principle.
6. What is the composition of bile, and what is its action?
7. Describe the influence of respiration on the circulation.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*All questions carry equal marks*

1. What are the functions of the large intestine?
2. What are ductless glands? How do they act? Name them.
3. Describe the circulation in the kidney.
4. What are the effects which follow severance of the spinal cord?
5. Give a general view of the action of the nervous system.
6. Draw a diagram of a section through the eye-ball, showing the position of the different structures.
7. Describe the function of the semicircular canals.



## BOTANY

## FIRST PAPER

*Paper-Settlers*— { PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc.,  
F.R.S.E.  
DR. SAHAYRAM BOSE, PH.D.  
MR. SURENDRACHANDRA BANERJEE, M.A.,  
B.Sc., F.L.S.

*Examiners*— { MR. SURENDRACHANDRA BANERJEE, M.A., B.Sc.,  
F.L.S. (*Head Examiner*);  
,, JYOTISCHANDRA PAI, M.A.  
,, ILABANTA BANERJEE, M.Sc.  
,, KANTIGOPAL BANDYOPADHYAY, M.Sc.  
,, ALOKKUMAR SEN, M.Sc.  
,, MURARIMOHAN RAYCHAUDHURI, M.Sc.  
,, NAGENDRANARAYAN CHAKRABARTI, B.A.,  
B.Sc. (Ohio).  
,, HEMENDRACHANDRA MUKHERJEE, M.Sc.  
MRS. SAROJINI DATTA, M.A.  
MR. AMIYAKUMAR GHOSH, M.Sc.  
DR. NAGENDRAMOHAN GUPTA, PH.D. (WIEN.).  
MR. SAILENDRAPRASAD NAG, M.Sc.  
DR. SYED HIDAYATULLAH, M.Sc., PH.D.

*Candidates are required to give their answers in their own words as far as practicable*

*Answer only FIVE questions*

*The figures in the margin indicate full marks*

1. How would you distinguish between a tuber, a root-stock, and a napiform root? Illustrate your answer with an example of each. Give neat sketches. 20
2. What is an albuminous seed? Describe the structure of a dicotyledonous albuminous seed. Give an example, with sketches. 20
3. Distinguish between vernal and aestivation. Describe the principal forms of each. 20
4. Describe the sporangiferous spike of an *Equisetum*. Give a neat sketch. 20
5. What is alternation of generations? Explain it in the case of a Fern. 20
6. Describe the life-history of a *Mucor*, with sketches. 20
7. Describe the germination of a monocotyledonous seed, with an example and neat sketches. 20

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer only FIVE questions*

*The figures in the margin indicate full marks*

1. Describe, with the aid of a diagram, the microscopical appearance of a transverse section of the stem of a monocotyledonous plant. 20
2. What are lenticels? How are they formed? 20
3. Describe the various modes of new cell-formation. 20
4. Give the characters of the natural order *Anonaceae*, with an example and sketches. 20
5. Define the following terms, and mention in each case the natural order in which an example can be found :—(a) tetradynamous, (b) epicalyx, (c) vexillum, (d) gynobasic, and (e) corona. 20
6. What is respiration? Describe the process in an ordinary land-plant. 20
7. Describe the process of obtaining raw food materials from the soil by an ordinary green plant. 20

## ZOOLOGY

## FIRST PAPER

*Paper-Setters*— { DR. HIMADRIKUMAR MOOKERJEE, M.Sc.  
(CAL.). D.Sc. (LOND.). D.I.C.  
,, BAINI PRASAD, D.Sc.  
,, H. S. PURETHI, D.Sc.

*Examiners*— { DR. HARENDRANATH RAY, M.Sc., Ph.D.  
MR. PURNENDUNATH CHAUDHURI, M.B.

*Candidates are required to give their answers in their own words as far as practicable*

*Four questions are to be attempted*

*The figures in the margin indicate full marks*

1. Describe the structure of *Paramacium*. 25
2. Describe the life-history of *Hydra*. 25
3. Enumerate the general characters of *Echinodermata*. 25
4. Give the distinguishing characters of Crayfish and Cockroach. 25
5. Give a broad classification of the Phylum *Mollusca*. 25
6. Write short notes on :—(a) Crystalline style, (b) Nephridium, (c) Chitin, (d) Budding, (e) Otocyst. 25

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*FOUR questions are to be attempted*

*The figures in the margin indicate full marks*

1. Enumerate the chief characters of *Amphioxus*. 25
  2. Describe the mechanism of circulation through the heart of a frog. 25
  3. Describe the urino-genital system of a male frog. 25
  4. Describe the pectoral-girdle of a pigeon. 25
  5. What are characteristic features of a mammal? 25
  6. Write short notes on :—(a) pancreas, (b) notochord, (c) gizzard, (d) hyoid apparatus, (e) atlas. 25
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# B.A. EXAMINATION,

## 1933

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### ENGLISH—HONOURS

<i>Paper-Setters— (Pass and Honours)</i>	DR. HARENDRACOOMAR MOOKERJEE, M.A.,	PH.D.
	MR. NIRMALKUMAR SIDDHANTA, M.A. (CAL.),	B.A. (CANTAB.).
	RAI SATYENDRANATH BHADRA, BAHADUR, M.A.	
	PROF. SUNITIKUMAR CHATTERJI, M.A., D.LIT.	
	MR. BIJAYGOPAL MUKHERJEE, M.A.	
	SIR A. SUHRAWARDY, KT., M.A., PH.D.,	
	D.LITT., BARRISTER-AT-LAW, M.L.A.	
	MR. C. C. BISWAS, C.I.E., M.A., B.L.,	M.L.A.
	MR. JYOTISCHANDRA BANNERJEE, M.A.	
	PROF. JAYGOPAL BANERJEE, M.A.	
<i>Examiners—</i>	REV. A. CAMERON, M.A., B.D.	
	MR. A. K. CHANDA, M.A.	
	REV. FATHER F. X. CROHAN, S.J.	
	MR. PRAPHULLACHANDRA GHOSH, M.A.	
	,, J. W. HOLME, M.A.	

### FIRST HONOURS PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Write a short essay on Shakespeare's conception of Tragedy, as illustrated in *Julius Caesar*. 15  
*Or*, 'The character of Cassius serves as a foil to that of Brutus.' Discuss. 15
2. *Either*, Sketch the character of Miranda, and discuss the propriety of her language and sentiments in the scenes in which she meets Ferdinand. 15  
*Or*, 'Prospero is not Shakespeare, but the play is in a certain measure autobiographical.' Discuss. 15
3. *Either*, What are the moral lessons specially emphasized in *The Tempest*? 10  
*Or*, 'It seems difficult to escape from the conclusion that Shakespeare intended his monster (Caliban) as a satire incarnate on Montaigne's "noble savage."' Discuss. 10

4. *Either*, Write a critical note on Shakespeare's conception of the character of Julius Caesar. 10

Or, 'In this play (*Julius Caesar*) one of the most minutely described personages, if it can be so called, is the People.' Illustrate. 10

5. *Either*. What do you take to be the central idea of Tennyson's *Holy Grail*? (Give your answer in the form of a short essay.) 14

Or, 'He (Keats) was as near to the Greek spirit as any Englishman has ever been.' Discuss (with special reference to *Lamia*). 14

6. Explain any four of the following :— 26

(a) He being thus lorded,  
 . . . —like one  
 Who having unto truth, by telling of it,  
 Made such a sinner of his memory,  
 To credit his own lie,—he did believe  
 He was indeed, the duke.

(b) And, for the sage,  
 Let spear-grass and the spiteful thistle wage  
 War on his temples. Do not all charms fly  
 At the mere touch of cold philosophy?  
 Philosophy will clip an Angel's wings,  
 Conquer all mysteries by rule and line.

(c) *Alon*. And Trinculo is reeling-ripe : where should they  
 Find this grand liquor that hath gilded 'em?—  
 How cam'st thou in this pickle?

*Trin*. I have been in such a pickle since I saw you last,  
 that, I fear me, will never out of my bones : I shall not fear fly-blowing.

(d) Even by the rule of that philosophy  
 By which I did blame Cato for the death  
 Which he did give himself—I know not how,  
 But I do find it cowardly and vile,  
 For fear of what might fall, so to prevent  
 The time of life.

(e) Said Hóseyn : ' God gives each man one life, like a lamp,  
 then gives  
 That lamp due measure of oil : lamp lighted—hold high,  
 wave wide  
 Its comfort for others to share ! once quench it, what help  
 is left?  
 The oil of your lamp is your son : I shine while Muléykeh  
 lives.'

(f) The Genius and the mortal instruments  
 Are then in council ; and the state of man,  
 Like to a little kingdom, suffers then  
 The nature of an insurrection.

## SECOND HONOURS PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Discuss the statement : ' It (Burke's political philosophy) is of the essence of compromise : its criteria are the possible, the expedient, the becoming : it is not concerned with abstract principles except in their bounded application to facts and circumstances.' .2

2. Briefly indicate the nature of Burke's attempt at a vindication of his own policy with regard to the American Colonies and of the Party System in general, so far as may be gathered from *A Letter to the Sheriffs of Bristol*. 12

3. Explain, with reference to the context, any two of the following :— 16

(a) But nothing in progression can rest on its original plan. We may as well think of rocking a grown man in the cradle of an infant.

(b) War suspends the rules of moral obligation, and what is long suspended is in danger of being totally abrogated.

(c) We are not too nicely to scrutinize motives as long as action is irreproachable. It is enough (and for a worthy man perhaps too much) to deal out its infamy to convicted guilt and declared apostasy.

(d) Our business was to rule, not to wrangle; and it would have been a poor compensation that we had triumphed in a dispute, whilst we lost an empire.

4. Either, From the essays of Lamb included in your text-book, illustrate the following observation :—' The essay in our time takes many forms. . . It may be a fragment of autobiography or a piece of nonsense.' 14

Or, Characterize Lamb's *humour*, illustrating your answer by particular references. 14

5. Either, Briefly describe Hazlitt's impressions of Lamb and North-cote, as given in his *Conversation of Authors*. 10

Or, Reproduce the substance of Lowell's review of White's *Natural History of Selborne*. 10

6. Explain, with reference to the context, any two of the following :— 16

(a) I went to the university, but was soon torn from thence by that violent public storm which would suffer nothing to stand where it did; but rooted up every plant, even from the princely cedars to me, the hyssop.

(b) Nature is an instructed and impartial teacher, spreading no crude opinions, and flattering none; she will be neither radical nor conservative. Consider the moonlight, so civil, yet so savage.

(c) We house together, old bachelor and maid, in a sort of double singleness; with such tolerable comfort, upon the whole, that I, for one, find in myself no sort of disposition to go out upon the mountains, with the rash king's offspring, to bewail my celibacy. We agree pretty well in our tastes and habits—yet so, as ' with a difference.'

(d) These aged things have on them the dew of man's morning; they lie near, not so much to us, the semi-artificial flowerets, as to the trunk and aboriginal taproot of the race.

7. *Either*, Write a review of the Book of Job in the light of the following observation :—' Never think that God's delays are God's denials. Hold; hold fast; hold out. . . With time and patience the mulberry-leaf becomes satin.' 20

*Or*, From your acquaintance with the Psalms, illustrate the following :—' They are a mirror of the human heart in all its spiritual moods and emotions, in penitence, in desire for holiness, in doubt and perplexity, in danger and desolation, or again in deliverance or triumph.' 20

### THIRD HONOURS PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay on *one* of the following subjects :— 50

(a) Political life and thought in India.

(b) The decadence of modern literature.

(c) The art of public speaking.

(d) 'In the long war between falsehood and truth, falsehood always wins the first battle and truth the last.'

2. Give the substance of *one* of the following passages :— 25

(a) We talk a great deal of the rose-coloured illusions in which youth wraps the world, and the agony it suffers as they are stripped from its bare, hard face. But the fact is that youth (aside from its narrow, passionate friendships) is usually apt to be acrid and watery and sour in its judgement and creeds—it has the quality of any other unripe fruit: it is middle age that is just and tolerant, that has found room enough in the world for itself and all human flies to buzz out their lives good-humouredly together. It is youth who can see a tangible devil at work in every party or sect opposed to its own, whose enemy is always a villain, and who finds treachery and falsehood in the friend who is occasionally bored or indifferent: it is middle age that has discovered the sweet golden mean of human nature—who knows few saints perhaps, but is apt to find its friend and grocer and shoemaker agreeable and honest fellows. It is these vehement illusions, these inherited bigotries and prejudices, that tear and cripple a young man as they are taken from him one by one. He creeps out of them as a crab from the shell that has grown too small for him.

(b) I should like to go a step further and affirm that we have something to be grateful for even in the weaknesses of men like Robert Burns. Mankind is helped in its progress almost as much by the study of imperfection as by the contemplation of perfection. Had we nothing before us in our futile and halting lives but saints and the ideal, we might well fail altogether. We grope blindly along the catacombs of the world, we climb the dark ladder of life, we feel our way to futurity, but we can scarcely see an inch around or before us. We stumble and falter and fall, our hands and knees are bruised and sore, and we look up for light and guidance. Could we see nothing but distant, unapproachable impeccability, we might well sink prostrate in the

hopelessness of emulation and the weariness of despair. Is it not then, when all seems blank and lightless and lifeless, when strength and courage flag, and when perfection seems remote as a star, is it not then that imperfection helps us? When we see that the greatest and choicest images of God have had their weaknesses like ours, their temptations, their hour of darkness, are we not encouraged by their lapses and catastrophes to find energy for one more effort, one more struggle? Where they failed, we feel it a less dishonour to fail: their errors and sorrows make, as it were, an easier ascent from infinite imperfection to infinite perfection.

3. Express and expand the thought in *one* of the following pieces :—

(a) *Aladdin*

When I was a beggarly boy,  
And lived in a cellar damp,  
I had not a friend nor a toy,  
But I had Aladdin's lamp :

When I could not sleep for cold,  
I had fire enough in my brain,  
And builded, with roofs of gold,  
My beautiful castles in Spain!

Since then I have toiled day and night,  
I have money and power good store;  
But I'd give all my lamps of silver bright,  
For the one that is mine no more :  
Take, Fortune, whatever you choose—  
You gave, and may snatch again;  
I have nothing 'twould pain me to lose,  
For I own no more castles in Spain!

(b) Alone I walked the ocean strand;  
A pearly shell was in my hand :  
I stooped and wrote upon the sand  
My name—the year—the day.  
As onward from the spot I passed,  
One lingering look behind I cast;  
A wave came rolling high and fast,  
And washed my lines away.

And so, methought, 'twill shortly be  
With every mark on earth from me :  
A wave of dark oblivion's sea  
Will sweep across the place  
Where I have trod the sandy shore  
Of time, and been, to be no more,  
Of me—my day—the name I bore,  
To leave no track nor trace.

And yet, with Him who counts the sands,  
And holds the water in his hands,  
I know a lasting record stands  
Inscribed against my name,  
Of all this mortal part has wrought,  
Of all this thinking soul has sought,  
And from these fleeting moments caught  
For glory or for shame.

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## FOURTH HONOURS PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Illustrate from the Fifth Book of the *Golden Treasury* 12  
the significance of the comment: 'The Victorian time was one of  
unparalleled material prosperity for England; but prosperity proved  
but a faint motive to song, and in the more enduring expressions of  
the mind, the note of inner disturbance and dissatisfaction is far more  
clearly heard.'

*Or*, Write a critical appreciation of any one of the following 12  
poems:—

- (a) *War Song of the Saracens*. (FLECKER.)
- (b) *The Laboratory -Ancient Régime*. (BROWNING.)
- (c) *To Virgil*. (TENNYSON.)
- (d) *Dorset Beach*. (M. ARNOLD.)

2. *Either*, Schlegel says that the Chorus in a Classical play is 14  
'the spectator idealised,' or in other words is 'the universal voice of  
moral sympathy, instruction and warning.' Indicate clearly how far  
the Chorus in *Samson Agonistes* fulfils these conditions.

*Or*, 'The personage of *Samson Agonistes* being a veiled present- 14  
ment of the tragedy of Milton's own life, also allegorises the ruin of  
the public cause to which that life had been devoted.' Explain and  
illustrate the remark from the text.

3. *Either*, 'Pope's poetry is not a mountain-tarn, like that of 14  
Wordsworth, it is not in sympathy with the higher moods of the mind.  
It was a mirror in a drawing-room, but it gave back a faithful picture  
of society.' Elucidate this.

*Or*, 'Burns, a national and universal poet, is yet in a special 14  
sense the poet of the peasant.' Write an appreciation of the poetry of  
Robert Burns, with special reference to the above remark.

4. *Either*, 'The leading events of *King Richard II* and all the 7  
persons except the Queen, the whole substance, action and interest  
are purely historical, with only such heightening of effect, such vivid-  
ness of colouring and such vital invigoration, as poetry can add without  
marring or displacing the truth of history.' Examine the accuracy of  
this remark.

*Or*, Indicate and comment on any incidents, not based on 7  
historical truth, which Shakespeare has introduced in his *Richard II*.

5. Delineate the character of Bolingbroke, with special reference 10  
to his attitude in the deposition Scene.

6. Explain, with reference to the context, any three of the follow- 18  
ing passages, adding notes where necessary:—

- (a) Twilight and evening bell,  
And after that the dark!  
And may there be no sadness of farewell,  
When I embark;

For tho' from out our bourne of Time and Place  
The flood may bear me far,  
I hope to see my Pilot face to face  
When I have crost the bar.

- (b) I strove with none, for none was worth my strife,  
 Nature I loved and, next to Nature, Art;  
 I warm'd both hands before the fire of life;  
 It sinks, and I am ready to depart.
- (c) From scenes like these old Scotia's grandeur springs,  
 That makes her lov'd at home, rever'd abroad;  
 Princes and lords are but the breath of kings,  
 An honest man's the noblest work of God.
- (d) If Heaven a draught of heav'nly pleasure spare,  
 One cordial in this melancholy vale,  
 'Tis when a youthful, loving, modest pair  
 In other's arms breathe out the tender tale  
 Beneath the milk-white thorn that scents the evening gale.
- (e) Not all the water in the rough rude sea  
 Can wash the balm off from an anointed king.
- (f) Here did she fall a tear, here in this place  
 I'll set a bank of rue, sour herb of grace;  
 Rue, even for ruth, here shortly shall be seen.  
 In the remembrance of a weeping queen.

7. Give in your own words the substance of *one* of the following, 25  
 pointing out any special excellences that strike you :—

(a) *Sea Fever*

I must go down to the seas again, to the lonely sea and  
 the sky,  
 And all I ask is a tall ship and a star to steer her by;  
 And a wheel's kick and the wind's song and the white sail's  
 shaking,  
 And a gray mist on the sea's face, and a gray dawn breaking.  
 I must go down to the seas again, for the call of the running  
 tide  
 Is a wild call and a clear call that may not be denied;  
 And all I ask is a windy day with the white clouds flying,  
 And the flung spray and the blown spume, and the sea-gulls  
 crying.  
 I must go down to the seas again to the vagrant gypsy life,  
 To the gull's way and the whale's way where the wind's like  
 a whetted knife;  
 And all I ask is a merry yarn from a laughing fellow-rover,  
 And a quiet sleep and a sweet dream when the long trick's  
 over.

- (b) Make me thy lyre, even as the forest is :  
 What if my leaves are falling like its own !  
 The tumult of thy mighty harmonies  
 Will take from both a deep, autumnal tone,  
 Sweet though in sadness. Be thou, Spirit fierce,  
 My spirit ! Be thou me, impetuous one !  
 Drive my dead thoughts over the universe  
 Like withered leaves to quicken a new birth !  
 And, by the incantation of this verse,  
 Scatter, as from an unextinguished hearth  
 Ashes and sparks, my words among mankind !  
 Be through my lips to unawakened earth  
 The trumpet of a prophecy ! O, Wind,  
 If Winter comes, can Spring be far behind ?

## FIFTH HONOURS PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Explain, with reference to the context, *three* of the following passages :— 24

(a) But the idea of beauty and of a human nature perfect on all its sides, which is the dominant idea of poetry, is a true and invaluable idea, though it has not yet had the success that the idea of conquering the obvious faults of our animality, and of a human nature perfect on the moral side—which is the dominant idea of religion—has been enabled to have.

(b) Yet even in the Old Testament, if you listen to David's harp, you shall hear as many hearse-like airs as carols. And the pencil of the Holy Ghost hath laboured more in describing the afflictions of Job than the felicities of Solomon. Prosperity is not without many fears and distastes; and adversity is not without comforts and hopes.

(c) The great winding-sheets that bury all things in oblivion are two: deluges and earthquakes. As for conflagrations and great droughts, they do not merely dispeople, but destroy. Phaeton's car went but a day; and the three years' drought in the time of Elias was but particular, and left people alive.

(d) One may concede that it was impossible for him to see Christianity as it really was; as impossible as for even the moderate and sensible Fleury to see the Antonines as they really were; one may concede that the point of view from which Christianity appeared something anti-civil and anti-social, which the State had the faculty to judge, and the duty to suppress, was inevitably his.

(e) There is great use of ambitious men in being screens to princes in matters of danger and envy; for no man will take that part except he be like a seeled dove, that mounts and mounts, because he cannot see about him. There is use also of ambitious men in pulling down the greatness of any subject that overtops; as Tiberius used Maero in the pulling down of Sejanus.

(f) Style takes your fancy, arguing takes your fancy, and you forget your home and want to make your abode with them and to stay with them, on the plea that they are taking. Who denies that they are taking? But as places of passage, as inns. And when I say this, you suppose me to be attacking the care for style, the care for argument. I am not.

2. *Either*, Illustrate Bacon's character from his *Essays*. 17

*Or*, 'Bacon was a rhetorician rather than a philosopher.' Discuss.

*Or*, 'A loose sally of the mind, an irregular undigested piece; not a regular and orderly composition.' How far does this description apply to the essays of Bacon?

3. *Either*, How far is it true to say that Arnold's prose works embody a protest against the spirit of the age? 17

*Or*, From your study of Arnold, what would you consider to be his permanent value as a literary critic?

4. Write a short essay, contrasting the prose styles of Bacon and Arnold. 17

5. Give the substance of *one* of the following passages :—

25

(a) Prose of its very nature is longer than verse, and the virtues peculiar to it manifest themselves gradually. If the cardinal virtue of poetry is love, the cardinal virtue of prose is justice; and whereas love makes you act and speak on the spur of the moment, justice needs inquiry, patience, and a control even of the noblest passions. But English prose, as the anthologists present it, is at the mercy of its passions and just only by accident. By justice here I do not mean justice only to particular people or ideas, but a habit of justice in all the processes of thought, a style tranquillized and a form moulded by that habit. The master of prose is not cold, but he will not let any word or image inflame him with a heat irrelevant to his purpose. Unhasting, unresting he pursues it, subduing all the riches of his mind to it, rejecting all beauties that are not germane to it making his own beauty out of the very accomplishment of it, out of the whole work and its proportions, so that you must read to the end before you know that it is beautiful. But he has his reward, for he is trusted and convinces, as those who are at the mercy of their own eloquence do not; and he gives a pleasure all the greater for being hardly noticed. In the best prose, whether narrative or argument, we are so led on as we read, that we do not stop to applaud the writer: nor do we stop to question him.

(b) The poetical mind is one full of the eternal forms of beauty and perfection; these are its material of thought, its instrument and medium of observation—these colour each object to which it directs its view. It is called imaginative or creative, from the originality and independence of its modes of thinking, compared with the commonplace and matter-of-fact conceptions of ordinary minds, which are fettered down to the particular and individual. At the same time it feels a natural sympathy with everything great and splendid in the physical and moral world; and selecting such from the mass of common phenomena, incorporates them, as it were, into the substance of its own creation. From living thus in a world of its own, it speaks the language of dignity, emotion, and refinement. Figure is its necessary medium of communication with man, for in the feebleness of ordinary words to express its ideas, and in the absence of terms of abstract perfection, the adoption of metaphorical language is the only poor means allowed it for imparting to others its intense feelings. A metrical garb has, in all languages, been appropriated to poetry—it is but the outward development of the music and harmony within. The verse, far from being a restraint on the true poet, is the suitable index of his sense and is adopted by his free and deliberate choice.

### SIXTH HONOURS PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer six questions only, as indicated below*

*The figures in the margin indicate full marks*

#### GROUP I. HISTORY OF ENGLISH LITERATURE

*(Answer Question 1 and two others from this group)*

1. *Either*, Write brief notes on four of the following works, mentioning their importance in the history of English literature :— 18  
*Beowulf, Ormulum, Pearl, The King's Quair, Tottel's Miscellany,*

*Arcadia, Ralph Roister Doister, Areopagitica, Robinson Crusoe, Pope's Homer, The Spectator, Gulliver's Travels, Rasselas, The Decline and Fall of the Roman Empire, Idylls of the King.*

*Or, Discuss in brief the position of two of the following writers in the history of English literature :—Caedmon, Layamon, Sir Thomas Malory, Christopher Marlowe, John Dryden, James Thomson, William Blake, Thomas Carlyle.*

2. Discuss the form and extent of Old English poetry, briefly contrasting its spirit with that of Middle English poetry. 16

3. *Either*, Give a sketch of the work of the more important English poets of the fourteenth century, excluding Chaucer. 16

*Or*, Indicate in brief the development of English prose up to 1550.

4. *Either*, Give a brief survey of Elizabethan poetry. 16

*Or*, Who were the 'metaphysical poets,' and what were the main characteristics of their poetry? Indicate their place in the history of English literature.

5. What is meant by the 'Romantic Revival' in English literature? Mention the more important writers of this movement, and indicate the nature of their contribution to English literature. 16

6. Give a critical appreciation of some Victorian poet or novelist with whose work you are familiar. 16

## GROUP II. ENGLISH PHILOLOGY

(Answer Question 1 and two others from this group)

1. *Either*, Write notes on four of the following words :— 18  
*kitchen, dainty, bridal, handbook, bask, leal, doubt, kindergarten, Miss, Yankee, children, not, surround, helpmate, scientist.*

*Or*, Discuss two of the following :—(a) 'the beloved *I* with a big letter'; (b) primitive Aryan; (c) 'nonce-words' and their origin; (d) back-formations, with examples; (e) Johnsonese; (f) malapropism; (g) 'value-stress.'

2. *Either*, Institute a comparison of English as a language with any other language you know. 16

*Or*, What, according to Jespersen, are the striking characteristics of English as a language?

3. Discuss briefly how Latin has helped to build the English language. 16

4. Discuss the origin and history of the following affixes of English :—(a) *-ish*; (b) *-s* for the verb third person singular, present tense; (c) *-able*; (d) *-ee*. 16

5. Write notes on two of the following :— 16

(a) The English Bible and the English language.

(b) Influence of Christianity on Old English.

(c) 'Linguistic omnivorousness' of Modern English.

(d) The split infinitive.

6. Write a short essay on the language of Shakespeare. 16

## ENGLISH—PASS

## FIRST PASS PAPER

PROF. JNANRANJAN BANERJEA, M.A., B.L. (*Chairman*).

Examiners—	{	Mrs. RAJKUMARI DAS, M.A.
		MR. AMULYACHANDRA AIKAT, M.A.
		„ BATUKNATH BHATTACHARYA, M.A. .
		„ ABINASCHANDRA BOSE, M.A.
		„ NALINIMOHAN CHATTERJEE, M.A.
		„ PRIYANATH CHATTERJEE, M.A.
		„ SOMESWARPRASAD MOOKERJEE, M.A.
		„ SURESHCHANDRA RAY, M.A.
		„ SURESHCHANDRA SENGUPTA, M.A.
		„ ANANDAKRISHNA SINHA, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Compare the speeches of Brutus and Antony, laying special stress on the rhetorical devices by which the latter excites the mob to fury. 15  
*Or*, 'The difference in the two women (Portia and Calpurnia) is not more remarkable than that in their husband's bearing and tone towards them.' Illustrate.
2. *Either*, Examine the external and internal evidences which may help you to determine the date of the composition of *The Tempest*. 15  
*Or*, Discuss the character of Prospero. What moral lesson can be drawn from his conduct towards his wicked brother?
3. *Either*, 'Had he (Shakespeare) never created a Miranda, we should never have been made to feel how completely the purely natural and the purely ideal can blend into each other.' Illustrate. 15  
*Or*, It has been remarked that the play of *Julius Caesar* is wrongly named, and should have been called *Brutus*. Does this objection seem to you to be reasonable? 15
4. *Either*, Sketch briefly the characters of the King and the Vizier in Arnold's poem. *The Sick King in Bokhara*. 15  
*Or*, Write a note on Byron's qualities as a narrative poet, with special reference to *Mazeppa's Ride*. 15
5. Explain any four of the following :— 40
  - (a) For when the Lord of all things made Himself  
 Naked of glory for His mortal change,  
 'Take thou my robe,' she said, 'for all is thine,'  
 and she  
 Follow'd Him down, and like a flying star  
 Led on the gray-hair'd wisdom of the east.
  - (b) If you but knew how you the purpose cherish  
 Whiles thus you mock it! how, in stripping it,  
 You more invest it! Ebbing men, indeed,  
 Most often do so near the bottom run  
 By their own fear or sloth.

- (c) Here wast thou bay'd, brave hart;  
Here didst thou fall; and here thy hunters stand,  
Sign'd in thy spoil, and crimson'd in thy lethe.  
O world, thou wast the forest to this hart;  
And this, indeed, O world, the heart of thee.

(d) Ste. Mistress line, is not this my jerkin? Now is the jerkin under the line: now, jerkin, you are like to lose your hair, and prove a bald jerkin.

*Trim.* Do, do: we steal by line and level, an't like your grace.

- (e) It was no dream; or say a dream it was,  
Real are the dreams of Gods, and smoothly pass  
Their pleasures in a long immortal dream.

- (f) O hateful error, melancholy's child,  
Why dost thou show to the apt thoughts of men  
The things that are not? O error, soon conceived,  
Thou never comest unto a happy birth,  
But kill'st the mother that engender'd thee!

- (g) Why should I relate  
That objects which the Shepherd loved before  
Were dearer now? that from the Boy there came  
Feelings and emanations—things which were  
Light to the sun and music to the wind;  
And that the old Man's heart seemed born again?

## SECOND PASS PAPER

Examiners—	{	MR. GIRIJASANKAR BHATTACHARYYA, M.A.
		„ MANJUGOPAL BHATTACHARYYA, M.A.
		„ JITENDRANATH CHAKRABARTI, M.A.
		„ NARENDRANATH CHATTERJEE, M.A.
		„ JITESCHANDRA GUHA, M.A.
		REV. G. H. C. ANGUS, M.A., B.D.
		MR. GOPALCHANDRA MAITRA, M.A.
		„ RAMPADA MAJUMDAR, M.A.
		„ JYOTISCHANDRA MITRA, M.A.
		„ SUHASCHANDRA RAY, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Do you agree with the opinion that, with the passage of time Burke's moral wisdom shines more and more only because it is based on the immutable principles of justice and morality? Give reasons for your answer. 16

*Or*, Write a note on Burke as a man, basing your opinion on what you can infer of his character from his attitude towards America.

2. Explain any *two* of the following, adding notes where necessary :— 16

(a) You judge of the delinquency of men merely by the time of their guilt, you make fortunes and accidents the rule of your justice.

(b) The Court gazette accomplished what the abettors of independence had attempted in vain.

(c) Liberty must be limited in order to be possessed.

3. *Either*, You will find that the essays of Charles Lamb appear with greater frequency than those of any other author in your text *English Essays*. What is your explanation of this partiality for his writings? 16

*Or*, Write a short note on the appreciation of Nature and her beauties as seen in the essays of any one of the following writers :— Henry, Thoreau, John Ruskin, and Richard Jefferies.

4. Explain with reference to the context any *two* of the following :— 16

(a) Here lies a Lord of Life, aged six months. He would never be broken to the house, but was adorable after sin.

(b) All the couriers in Europe spurring rowel-deep make no stir in Mr. White's little Chartreuse.

(c) Men of old time worshipped cats as they worshipped crocodiles; and those magnificent old mystics knew what they were about.

5. *Either*, Discuss Pater's dictum that *Esmond* is 'a perfect fiction.' 20

*Or*, Give in your own words Thackeray's description of the character and doings of those eighteenth-century 'wits' who figure in his *Esmond*.

6. *Either*, Comment upon the following :—'The *Psalms* are intended not for one age, but for all time.' 16

*Or*, Discuss the statement that *Job* is a 'philosophical and theological dissertation in a dramatic form.' Your answer should be illustrated by references to your text.

### THIRD PASS PAPER

Examiners—	{	MR. JYOTISCHANDRA BANERJEE, M.A.
		„ A. H. HARLEY, M.A.
		REV. FATHER L. BRYAN, S.J.
		MR. NARENDRANATH CHAKRABARTI, M.A.
		„ ASUTOSH CHATTERJEE M.A.
		„ SARATCHANDRA GUPTA, M.A.
		„ CHANDICHARAN MITRA, M.A.
		„ RAMAPRASAD MOOKERJEE, M.A., B.L.
		„ SYAMACHARAN MUKHERJI, M.A.
		„ KUMUDBANDHU RAY, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Give the substance of *one* of the following passages :— 25

(a) It was famous, almost a proverbial, remark that Sappho's poems were 'few but roses.' What should we say if we found roses



on every table, rose-trees along the streets, if our tramcars and lamp-posts were festooned with roses, if roses littered every staircase and dropped from the folds of every newspaper? In a week we should be organizing a 'campaign' against them as if they were rats or house-flies. So with books. Week in, week out, a roaring torrent of novels, essays, plays, poems, books or travel, devotion, and philosophy, flows through the land—all good, all 'provocative of thought.' And they are so huge. Look at *The Forsyte Saga*, confessedly in itself a small library of fiction; *The Challenge to Sirius* is four short novels stitched together: consider the *Golden Bough*, how it grows. One is tempted to revolt and pretend in self-defence that these works are clever, facile, and bad. But they are not; far from it. The flood leaves you no breath. Hardly have you recovered from C. E. Montague's dazzling *Fiery Particles*, when Mr. Guedalla comes at you with *Masters and Men*. Stop reading for an instant and you miss something really first-rate.

(b) And so having brought into the world 'noble children,' he rests from the labours of authorship. More than two thousand two hundred years have passed away since he returned to the place of Apollo and the Muses. Yet the echo of his words continues to be heard among men, because of all philosophers he has the most melodious voice. He is the inspired prophet or teacher who can never die, the only one in whom the outward form adequately represents the fair soul within; in whom the thoughts of all who went before him are reflected and of all who come after him are partly anticipated. Other teachers of philosophy are dried up and withered—after a few centuries they have become dust; but he is fresh and blooming, and is always begetting new ideas in the minds of men. They are one-sided and abstract; but he has many sides of wisdom. Nor is he always consistent with himself, because he is always moving onward, and knows that there are many more things in philosophy than can be expressed in words, and that truth is greater than consistency. He who approaches him in the most reverent spirit shall reap most of the fruit of his wisdom; he who reads him by the light of ancient commentators will have the least understanding of him.

2. Give the substance of *our* of the following poems :—

25

- (a) Of all the thoughts of God that are  
Borne inward into souls afar,  
Along the Psalmist's music deep,  
Now tell me if that any is,  
For gift or grace, surpassing this—  
'He giveth His beloved, sleep.'

What would we give to our beloved?  
The hero's heart, to be unmoved,  
The poet's star-tuned harp, to sweep  
The patriot's voice to teach and rouse  
The monarch's crown to light the brows?—  
He giveth his beloved, sleep.

What do we give to our beloved?  
A little faith all undisproved,  
A little dust to overweep,  
And bitter memories to make  
The whole earth blasted for our sake.  
He giveth his beloved, sleep.

' Sleep soft, beloved !' we sometimes say,  
Who have no time to charm away  
Sad dreams that through the eyelids creep.  
But never doleful dream again  
Shall break the happy slumber when  
He giveth his beloved, sleep.

- (b) What is the existence of man's life  
But open war, or slumbered strife?  
Where sickness to his sense presents  
The combat of the elements;  
And never feels a perfect peace,  
Till earth's cold hand sings his release.

It is a storm, where the hot blood  
Outvies in rage the boiling flood;  
And each loud passion of the mind  
Is like a furious gust of wind,  
Which beats his bark with many a wave,  
Till he casts anchor in the grave.

It is a flower, which buds and grows,  
And withers as the leaves disclose;  
Whose spring and fall faint seasons keep,  
Like fits of waking before sleep:  
Then shrinks into that fatal mould  
Where its first being was enrolled.

3. Write an essay on one of the following subjects :—

50

- (a) Indian womanhood.  
(b) Charity is greater than justice.  
(c) A thing of beauty is a joy for ever.  
(d) The pleasures of life.  
(e) The choice of books.  
(f) The advantages of travel.
-

## BENGALI VERNACULAR

Paper-Setters—{ PROF. DINESCHANDRA SEN, RAI BAHADUR, B.A.,  
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,, WAJED ALI, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. “ফুল দল দিয়া, কাটিল কি বিধাতা শাশ্বলী তরুবরে” ।

7

Explain fully the significance of the above simile with reference to the context.

2. Answer any three of the following :—

33

(a) Comment on the Bengali style of Madhusudan and discuss whether it's hold on our language has passed away or remains as a permanent factor in modern Bengali.

(b) Discuss fully whether Chandra Shekhar or Pratāp may be regarded as the principal hero of Bankim's *Chandra Shekhar*.

(c) Give an account of the last days of Madhusudan mentioning specially the services rendered to him by some of his friends.

(d) Discuss the great moral of life underlying the play of *Sakuntalā*, bringing out the humanising influence of misfortune on its principal characters.

3. Explain clearly in Bengali the idea contained in one of the following passages :—

15

(a) সাহিত্যকে দেশকালপাত্র ভেঙ্গে ছোট করিয়া দেখিলে ঠিকমত দেখাই হইবে না। আমরা যদি এইটে বুঝি যে, সাহিত্যে বিশ্বমানবই আপনাকে প্রকাশ করিতেছে, তবে সাহিত্যের মধ্যে আমাদের বাহা দেখিবার, তাহা দেখিতে পাইব। যেখানে সাহিত্য রচনার লেখক উপলক্ষমাত্র না হইয়াছে, সেখানে তাহার লেখা নষ্ট হইয়া গেছে।

যেখানে লেখক নিজের ভাবনার সমগ্র মানুষের ভাব অল্পভব করিয়াছে, নিজের লেখার সমগ্র মানুষের বেদনা প্রকাশ করিয়াছে, সেইখানেই তাহার লেখা সাহিত্যে জায়গা পাইয়াছে।

(b) জীবনে বত পূজা হোল না সারা,  
জানি হে জানি তাও হয়নি হারা।  
যে ফুল না ফুটিতে  
ঝরেছে ধরণীতে  
যে নদী মরু পথে হারাল ধারা  
জানি হে জানি তাও হয়নি হারা  
জীবনে আজও যাহা  
রয়েছে পিছে,  
জানি হে জানি তাও হয়নি মিছে।  
আমার শ্রমগত  
আমার অনাহত  
আমার বীণাতারে বাজিছে তারা  
জানি হে জানি তাও হয়নি হারা।

4. Form four sentences in Bengali to illustrate the different meanings of "ভাল" and four sentences to show the use of পরন্ত, পরোক্ষে, বৈধী, and কিংকর্তব্যবিমূঢ়। 10

5. Translate the following into Bengali :— 15

The *Birkenhead*, a large troop-ship, with 632 souls on board, was sailing off the coast of South Africa on a clear night in February, 1852. As the captain was anxious to shorten the voyage, and as the sea was calm, he kept as near as possible to the shore. Off Cape Danger, the vessel was steaming at the rate of nine miles an hour. Suddenly she struck upon a sunken rock with such force that in a few minutes she was a wreck. The roll of the drum called the soldiers to arms on the upper deck. The call was promptly obeyed, though every man knew that it was his death-summons. There they stood—no man showing fear or restlessness—and the ship was every moment going down, down.

6. Write an essay on one of the following subjects :— 20

(a) The peculiarities in character and customs of the people in any district of Bengal with which you are familiar.

(b) England and India—what they can learn from each other.

(c) "Ideals of womanhood—ancient and modern"—woman's place in society and domestic life—role of the mother and her influence on her sons and daughters—claim of equality of sexes.

## ALTERNATIVE PAPER IN BENGALI

## BENGALI (VERNACULAR)

(As an alternative paper for candidates taking up Bengali as Second Language)

*Paper Setter and Examiner*—PROF. SUNITI KUMAR CHATTERJI,  
M.A., D.LIT.

*Candidates are required to give their answers in their own words as far as practicable*

*Write your answers in Bengali : use EITHER the সাধু ভাষা OR the চলিত ভাষা, avoiding a mixture of the two styles in the same answer*

## GROUP I

## HISTORY OF BENGALI LITERATURE : 45 marks

*Select any THREE questions from this group*

1. Discuss the character of Chandidāsa's poetry. What positive facts do we know about his life, his age, and his work?

2. Give a short sketch of either the Gopichand legend or the Lāusen legend, and discuss its treatment in Early Bengali literature, mentioning the more important works dealing with it, with indication of their authors and their times.

3. Write a short essay on EITHER the *Rāmāyana*, or the *Mahābhārata* in Early Bengali literature.

4. Either, Give a short biography of Sri Chaitanyadeva, and indicate how his personality influenced Bengali literature.

Or, What are the more important Vaiṣṇava biographical works other than those relating to Chaitanyadeva? Discuss their authorship and importance.

5. Either, Write a short history of the rise of the drama in Bengali literature and its history down to 1900.

Or, Write a short essay on Bankim Chandra and his work.

6. Write short notes on five of the following works or authors :—

চর্যাচর্যাবিশিষ্ট ; মালাধর বসু ; শিবায়ন ; গোবিন্দদাস  
কবিরাজ ; শ্রী জীব গোস্বামী ; অন্নদামঙ্গল ; হরিশোলা ; রামনিধি গুপ্ত ;  
প্রবোধচন্দ্রিকা ; বোধেন্দুবিশ্বকাম ; হেতুপরিব্রাজ ; বঙ্গলাল বন্দ্যোপাধ্যায় ;  
বৃহৎসংহাৰ ; সোনারতরী ; রাজপুত জীবন-সন্ধ্যা ।

## GROUP II

## BENGALI PHILOLOGY : 25 marks

*Select any TWO questions from this group*

1. Discuss the pronunciation of the following letters in Bengali :—

অ, ঈ, ঐ, ও, ঔ, স ।

2. Indicate the place of Bengali among Indo-Aryan languages of the present day, and discuss the stages through which its history has evolved, quoting suitable words and forms to illustrate your points.

3. Discuss the origin of the affix *দিগের* in Bengali.

4. Write a note on the various elements in the vocabulary of Bengali. How is it that the same word of Old Indo-Aryan (Sanskrit) occurs in more than one form in Bengali?

### GROUP III

ESSAY IN BENGALI : 30 marks

Write an essay in Bengali on one of the following themes :

- (a) বৈষ্ণব গীতি-কবিতা ।
- (b) বাদলা মহাকাব্য ।
- (c) মাইকেল মধুসূদন দত্ত ।
- (d) একটি টাকার আত্মকথা ।
- (e) গঙ্গা ।
- (f) কলিকাতা নগরী ।
- (g) তীর্থযাত্রা ।
- (h) বেকার-সমস্যা ।
- (i) অর্থকরী বিজ্ঞা ।
- (j) বাদলা দেশের উন্নতির অন্তরায় ।
- (k) “আমার জীবনের আদর্শ বা উদ্দেশ্য” ।

### ASSAMESE VERNACULAR

*Paper-Setters*—{MR. BANIKANTA KAKATI, M.A.  
SRIJUT PADMANATH BORAH, B.A.

*Examiner*—MR. AMBIKANATH BORAH, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Assamese the following passages :—

15

India, whether regarded from a physical or intellectual standpoint, is itself the great exemplar of the doctrine of the One in Many which her philosophers proclaimed to the world. Though singularly varied both in climate and geographical character, there is one great force which regulates the rainfall and helps to fertilize the soil—the magnetic attraction of the tremendous mountain barriers which separate her from the main continent of Asia and hold up the onrush of the monsoon clouds..... And in the domain of thought, though India has been more prolific in schools of

philosophy and religion than any other country in the world, there runs through them all a vein of perception or insight which differentiates them from the characteristic bent of western intellect and makes them distinctly Indian. Religion in the West is the light given from above which illuminates the path of life but yet remains, for most men and women, remote from life itself. In India, philosophy and religion have always been regarded as the essence of all sciences and the mainspring of all the forces which control life in every aspect.

2. (a) Translate the following passage into modern Assamese :—

“নাওতে ভড়ি দি ইপাৰ সিপাৰ ছব পাৰি। দুই কোথৰ পৰা হিলৈ মাৰিব ধৰিলে; বঙাল বহুত পড়িল। বঙালক ভঙাই নিলে। পানীৰ যুদ্ধৰ পৰা আক যুদ্ধ নহল। তাত পাচে পচৰিয়াত বামসিংহ বহিল গৈ। চেচা নৈৰ কোথত মহাৰাজৰ আজ্ঞাবে ঘোড়া কোৱৰ আহিছিল; পাচে ইবোৰে ঘোড়া কোৱৰত কলে। চাৰিও দিকি পানি। দেৱতা বোলে যদি বঙালক ধৰিব পাৰি। এই কথা শুনি ৰাজা বোলে ধৰোক। বৰ ফুকন লৈকো দাই ধৰিলে। এনে কথা আচোতে যোলৈ কিয় নজনাৰ। লোকে যে জনাই পঠাই এই বুলি দাই ধৰিলে।”

(b) Give an account of the battle of 'Itakhuli' as given in your text. 5

3 Annotate any two of the following passages :— 10

(a) এই আক্ৰাণটি দেখি দুয়ুস্বৰ উপজিল অভিজ্ঞান।

(b) বেজাৰ আনন্দ দুয়োটি স্তৰেই একেটি স্তৰত বাজে।

(c) আৱৰ সাক্ষীত কমন প্ৰয়োজন; উনিকৰ মুখহি সাক্ষী।

(d) সৰাতে আচস্ত হৰি হুহিকা বেকত।

4. (a) Analyse the predominant poetic sentiments in 'Keteki.' 5

(b) Characterize the authors of 'Chandhāra' and 'Prahlaḍeharī' as idealistic poets. 10

5. Either, What differences in technique do you notice between an Old and a Modern Assamese drama? 15

Or, Write a critical review of the life and works of Saṅkar Deva.

6. Illustrate the uses of five of the following (a) verbal (কং) and (b) nominal (তদ্ধিত) suffixes :— 10

(a) —অনা; —আক; —উবা;

(b) —অং; —অঙ্গা; —ঐ।

7. Write an essay in Assamese on one of the following subjects :— 20

(a) অসমৰ অতীত, বৰ্তমান আৰু ভৱিষ্যৎ।

(b) আত্মবিলোপেই মহত্বৰ সোপান।

(c) অসম সাহিত্যিক সন্মিলনী।

(d) দেশৰ উপস্থিত আৰ্থিক সমস্যা।

## ORIYA VERNACULAR

*Paper-Setters*—{MR. ARTABALLABH MAHANTI, M.A.  
,, PRIYARANJAN SEN, M.A.

*Examiner*—MR. MAHESWAR DAS, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Oriya any *one* of the following passages :—

15

(a) For several hours the prince walked alone in unfrequented streets. His mind was full of concern; what to do with the diamond, whether to return it to its owner, whom he judged unworthy of this rare possession, or to take some sweeping and courageous measure and put it out of the reach of all mankind at once and for ever, was a problem too grave to be decided in a moment. The manner in which it had come into hands appeared manifestly providential; and as he took out the jewel and looked at it under the street lamps, its size and surprising brilliancy inclined him more and more to think of it as of an unimixed and dangerous evil to the world.

(b) He had the appearance of a finished gentleman; his face bore every mark of intelligence and courage; but you had only to look at him even in his most amiable moment, to see that he had the temper of a slaver captain. I never knew a character that was both explosive and revengeful to the same degree; he combined the vivacity of the south with the sustained and deadly hatreds of the north; and both traits were plainly written on his face, which was a sort of danger signal. In person he was tall, strong and active; his hair and complexion very dark, his features handsomely designed, but spoiled by a menacing expression.

67/ 2. Briefly sketch the character of either ନିରୁତ୍ତର or ଚନ୍ଦ୍ରଶେଖର 10

3. Write a note on either ସାହିତ୍ୟଚର୍ଚ୍ଚା, or ଚରିତ୍ର ଉପେକ୍ଷା 10  
ଉପେକ୍ଷା after the author of *Bibidha Prabandha*.

4. *Either*, Write a note on Madhusudan as a poet, or write appreciations of Madhusudan's poems in *Kusumanjali*. 10



5. Explain :—

15

(a) ଏ ମହାମାୟୁରୀ ଲୀଳା      ବରନ୍ତି ଦର୍ଶନ  
 ଦେଖୁଁ ଦେଖୁଁ ଅରିରୁତ      ମହାରାବେ ରୋଳା,  
 ଦେଖୁଁ ଦେଖୁଁ ନିମାଳିତ      ନୟନର ହୋଳା ।  
 ରଦ୍ରିୟ-ପ୍ରଗୀତ-ରୂମି-      ଅଗୀତ ସଂସାରେ  
 ନିମଗନ ମନ ପ୍ରାଣ      ଧ୍ୟାନ ପାରାବୀରେ,  
 ସହସ୍ର ସହସ୍ର ବିଦ୍ୟୁନ୍ମୁହୁଃ      ପରାବିନି,  
 ରୁଷିର ଅନ୍ତରେ ସ୍ମରେ      ମହାମୁଗ ଛବି ।

(b) ମାହିଁରେ ରାଉତବକ୍ଷେ ଆଜି ସେ ସରିତ,  
 କେତମାତା, ଆର୍ଯ୍ୟ ଦେହ ପୁଷ୍ଟ ଯାର ନୀରେ  
 ଆର୍ଯ୍ୟ କବି ଆତ୍ମା ପଦ୍ମ ଯହିଁ ବିଦଗିତ  
 ପିଣିଲ ସମ୍ବନ୍ଧ ତାର ପରମାତ୍ମା ମିହିର ସହିତ ।

(c) ସେହିପରି ଆତ୍ମମାନଙ୍କ ଅନ୍ତର୍ନିହିତ ପ୍ରାଣେକ ବୃତ୍ତି ସ୍ପର୍ଶର  
 ସୋପାନ-ଦେବତୁଲାରର ଉପାୟ । ସୁରା- ଯେଉଁ ପ୍ରେମ ମାନବତ୍ବଦୟର  
 ସର୍ବଶ୍ରେଷ୍ଠ ବୃତ୍ତି, ଯାହା ଆତ୍ମମାନଙ୍କର ସର୍ବ ପ୍ରକାର ମଧୁର ସମ୍ବନ୍ଧର  
 ମୂଳ, ସତତ ସଦୃଶ୍ୟର ପରିଚାଳକ ଓ ପରିପୋଷକ, ତାହା ଯେ  
 ସଂସାରର ଅସାର ରୋଗ୍ୟବସ୍ତୁରେ ପର୍ଯ୍ୟବସିତ ହେବା ନିମିତ୍ତ ହୁଏ,  
 ଏ କଥା ଚେରିତା ବାହୁଲ୍ୟ ମାତ୍ର ।

6. (a) Use any five of the following words in different sentences to bring out their different meanings :— 5

ସ୍ମରଣ, ଡାକିବା, ଚିନ୍ତାମିତା, ପାଲଟିବା, ବିଲ, ରାତି, ନାଉଁ ।

(b) Give five instances of ନାମଧାରୁ କ୍ରିୟା in five different sentences. 5

7. Write the following in an elegant style, making necessary corrections :— 10

ଆମ ରାଜ୍ୟରେ ଗୋଟିଏ କିଂବଦନ୍ତୀ ଅଛି ଯେ ଉତ୍କଳର  
ରାଜା ବ୍ରହ୍ମାଙ୍କ ନିକଟକୁ ଯିବା ବେଳକୁ ଗାଲମାଧବ ବୋଲି ଜଣେ  
ରାଜା ଜଗନ୍ନାଥଙ୍କୁ ନିଜର ଅଭିଷ୍ଟ ଦେବତା ମଣୀ ପୂଜା କଲା ଓ  
ଦିଅଳ ମନ୍ଦିରକୁ ନିଜତୋଳା ବୋଲି କହିଲା । ଉତ୍କଳର ଫେରି  
ଆସିଲାକୁ ବହୁତ ଧନିକରେ ପଡ଼ିଲେ । ଲଢ଼େଇ ହେଲା । ଗାଲମାଧବକୁ  
ସେ ଡାକିଲେ । ବହୁତ ସନ୍ଧ୍ୟା ନଷ୍ଟ ହେଲେ । ବ୍ରହ୍ମାଙ୍କ ସହିତ  
ଉତ୍କଳର ମନ୍ଦିରରେ ସହର୍ଷତାରେ ପ୍ରବେଶ ହେଲେ । ଦେବତାଙ୍କ  
ଅନୁଗ୍ରହରୁ ସବୁ କାର୍ଯ୍ୟ ସୁରରେ ଅନୁକୂଳହେଲା ଓ ସୋଲ୍ଲସତାରେ  
ସେଇ ହେଲା ।

8. Write an essay on one of the following subjects :— 20

- Industry.
- Man never is, but always to be blest.
- Self-control leads to success.

## HINDI VERNACULAR

Paper-Setters—{MR. NALINIMOHAN SANYAL, M.A.  
PANDIT SAKALNARAYAN SARMA.

Examiner—MR. RAMKRISHNA SUKLA, M.A.

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

The answers should be written in Hindi, unless otherwise directed

1. Translate one of the following passages into Hindi :— 15

(a) In doing some things, it is the amount of energy which we have available that matters; in doing others, it is the efficiency of special abilities that counts. For instance, when a man is faced with the planning out of something, it is the amount of intelligence, or mental energy, that he has at his disposal, that makes him do the job well or ill. But the man with lots of energy to work with, if faced with having to remember a list of dates, may fail utterly because his 'memory machine' is not efficient, while his friend, whose supply of mental energy is less, may have a very efficient 'memory machine', and remember the list perfectly.

(b) One of the worst experiences I had was in a tropic tornado. We had come through a night of strange happenings. There was something about the stillness of that night which preceded a storm. My night-watchman, a plucky Abor lad, was strangely perturbed. He told me he had seen a death omen, and wanted to be excused from duty. Great beads of sweat stood upon his forehead. Brave man as he really was, he stuck to his post as long as he could; then, with one look upwards, as if being attacked by a huge monster, with whom he was unable to combat, he suddenly turned and fled. Throughout the night there had been distant rumblings and angry mutterings, while every now and again the blackness was suddenly dispersed by a vivid flash of lightning.

2. There has been a controversy in literary circles as to whether Bhusan has a just claim to the high place hitherto accorded to him as a poet, or his poems are mere hardie effusions in praise of his master's valour. Name what रस he has mainly depicted, and show, with quotations from the *Sinā-Dāvanī*, whether he has or has not achieved success in delineating it. 10

3. Give in simple Hindi the main ideas contained in the following :— 15

मिस्टर वालेस के जीवन, उनके काम, उनके चरित्र पर एक विचार-पूर्ण दृष्टि डालने से यह ज्ञात होगा कि वे कोई सामान्य पुरुष न थे। चरित्र तथा प्रतिभा के बहुत से अंग जो एक महान् पुरुष को सामान्य व्यक्ति से पृथक् करते हैं, उनमें विद्यमान थे। उनमें एक महान् औपन्यासिक के बहुत से गुण मौजूद थे, किन्तु उन सभी का यथोचित सुरुचि-पूर्ण उपयोग न हो सका। उनके जीवन का मूल-मंत्र सफलता प्राप्त करना था। उन्होंने जो कुछ हुआ, सोना हो गया।

4. Either, Compare the devotion of Chandrāvālī with that of Rādhā. 3

Or, Why was Uddhav sent to Braj? What was the nature of his mission? Why did it fail? Give quotations in support of your statements.

5. (a) Write sentences to bring out the genders of any six of the following words :— 6

देवता, विधि, आत्मा, ऋतु, सैर, समाज, गल्प, सामर्थ्य, विनय, रिपोर्ट, शरबत, उमंग।

(b) Comment on the grammar or idiom of the underlined words in any four of the following sentences :— 4

- (i) हम रात को ग्यारह बजे के पहले कभी नहीं सोते हैं।
- (ii) उनके चारों ओर बहुतसे आदमी खड़े थे।
- (iii) अच्छे मनुष्य बहुधा धोखा में पड़ जाते हैं।
- (iv) हम कलकत्ता में रहते हैं।
- (v) श्रीमती सरैजिनी नाइडू बड़ी भारी कवि हैं।
- (vi) जुरी जुरी सी बात पर वेह बिगड़ते हैं।
- (vii) जिन मनुष्यों में कोई गुण नहीं वह दूसरों की निन्दा करते हैं।

6. Write an essay on *one* of the following subjects :—

23

(a) कहनी मीठो खाइ सी, करनी विष की होय ।

कहनी तज करनी करे, तब सफलता होय ॥

(b) Clouds, real and metaphorical.

(c) The obedience of Lakshman.

7. *Either*, What should be the characteristics of a short story? How does it differ from a novel? Show which of the seven stories in Prem Chand's *Sapta Saroj* conform to the characteristics of a short story and which do not. 12

(c), मैं सौन्दर्योपासक हूँ । सौन्दर्य को कौन नहीं चाहता ?

Define beauty and enumerate the various objects that appear beautiful to the writer of the above. Has beauty a standard? What in your opinion should be this standard?

8. Explain *one* of the following :—

14

(a) मनु तीरथ-मय कृष्ण चरित की कांवरी लीने ।

कै भूगोल खगोल दोउ कर अमलक कीने ॥

जग बुधि तौलन हेत मनहुं यह तुला बनाई ।

भक्ति मुक्ति की जुगल पिढारी कै छटकाई ॥

(b) विछुरे श्री ब्रजराज आषु इन नैनन तें परतीत गई ।

उठि न गई हरि संग तबहि तें, ह्वै न गई सखि स्याम मई ॥

रूप रसिक लालची कहावत, सो करनी कहु वै न भई ।

साचे कूर कुटिल ए लोचन, व्यथा मैं छबि छीनि लेई ॥

## URDU—VERNAOULAR

*Paper-Setters*—{ MAULVI SYED MOZAFFARUDDIN AHMAD, M.A.  
KHAN BAHADUR MAULVI MD. YUSUF.

*Examiner*—KHAN BAHADUR REZA ALI WAHSHAT.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*Answers to be given in Urdu*

1. Describe the different stages in the origin and development of the Urdu language. 14

2. Give a short account of the life of *either* Mir or Sauda, and discuss the characteristic features of his poetry. 12

3. Give the gender of any *six* of the following :— 6

طرز - خلعت - تعریض - فکر - شمشیر - درد - تنزل - ایجاد

4. Re-write correcting errors in the following:—

- (a) مینے تمکو کہدیتے ہیں کہ اگرچہ ایسا بات پھر کررکے  
تو اس کا سخت سزا پاؤگے \*
- (b) ہم تمہارا موافق آدمی نہیں مانگتا جو کوئی کام کرنے  
نہیں سکتا \*
- (c) ایک دفتر میں ایک بڑا آسامی خالی ہے - اس کا  
راسطے ایک پڑھا لکھا آدمی کا ضرورت ہے \*

5. Explain any three of the following:—

12

- (a) گوران نہیں پہ رے نکالے ہوئے تو ہیں  
کعبہ سے ان بتوں کو بھی نسبت ہے دور کی
- (b) اصل شہود و شاہد و مشہود ایک ہے  
حیران ہوں پھر مشافہہ ہے کس حساب میں
- (c) مجھکو دروزخ رشک جنت ہو اگر میرے لئے  
راں بھی آتش ہو کسی کے روئے آشناک سے
- (d) کفر کچھ چاہئے اسلام کی رونق کے لئے  
حسن زناں ہے تسبیم سلیمانی کا

6. Write short notes on the poetry of either Dard or Walī.

12

7. Translate into Urdu:—

20

It was a shock to a good many people to see that the latest Economy Committee recommends reductions in the pay of some of the best and most industrious servants of the country. As a matter of fact, no class or profession, section or occupation, will admit that it can afford reductions. Nobody thinks himself too well-paid. It is the other fellow's salary that ought to be cut. The question of reduction would never have arisen had the post-war governments of different countries refrained from spending more money, from launching any more extravagant schemes; had they anticipated these hard times which were anticipated by others. Now it is, in a sense, too late. The demand is for reductions so drastic that they must be hardships to many worthy people.

8. Write an essay in Urdu on any one of the following subjects:—

20

- (a) Failure is the pillar of success.  
(b) The present economic depression and its causes.  
(c) Peace has its victories no less renowned than war.

## URDU (VERNACULAR)

## ALTERNATIVE PAPER

*Paper-Setter*—KHAN BAHADUR REZA ALI WAHSHAT*Examiner*—PROF. MD. ZUBAIR SIDDIQUI M.A., PH.D.*Candidates are required to give their answers in their own words as far as practicable**The figures in the margin indicate full marks*

1. Either, 'Urdū, as a literary language, differs from Hindī rather in form than in its substance.' Discuss. 10

Or, Write a note on the early Delhi school of Urdū poets.

2. Give a sketch of the origin and progress of the drama in Urdū. 10
3. Give a short account in Urdū of any one of the following poets :— 30  
Saudā. Mir, Muṣṭafī, Ātash.
4. Translate into Urdū :— 25

The beginnings of the caste system are obscure, and indeed an eminent authority has declared the subject to present an insoluble problem. The original Sanskrit word for caste means 'colour,' and it is inferred that the system owes its origin to the desire of the fairer Aryan people who migrated into India to preserve their own racial characteristics by the imposition of social barriers between themselves and the dark-skinned races whom they found already established in the Indian Peninsula. The Brāhmins placed themselves in a position of ascendancy as the highest caste, with a monopoly of the priestly office and a claim to the monopoly of knowledge.

5. Write an essay on any one of the following subjects :— 25
- (a) Modern Urdū poetry.
- (b) Should the vernacular be the medium of instruction in schools?
- (c) The relation of agriculture to the prosperity of India.

## MARATHI VERNACULAR

*Paper-Setters*—{ PROF. D. R. BHANDARKAR, M.A., PH.D.  
MM. PANDIT SITARAM SASTRI.

*Examiner*—PROF. D. R. BHANDARKAR, M.A., PH.D.*Candidates are required to give their answers in their own words as far as practicable**The figures in the margin indicate full marks*

1. Write an essay in Marāṭhī on any one of the following :— 20
- (a) विसावे शताब्दीतील भारतवासीयांचे कर्तव्य ।
- (b) सामाजिक सुधारणा आणि प्राचीन धर्मशास्त्रे ।

2. Translate into Marāṭhi the following :—

15

The third quality of an excellent style is easy intelligibility. Really speaking, this is not much different from the above. But there are many subjects for whose exposition the common style of ordinary speech proves of little use. In the first place, since scientific and other subjects are far removed from our daily life, it is obviously impossible to express the ideas in them in simple, colloquial language; and another reason is that it is necessary to use a dignified style to make it suit the gravity of those and similar subjects. Thus sometimes out of necessity and sometimes owing to the gravity of the topic, a certain amount of obscurity in style is unavoidable on occasions. One has to borrow technical words and phraseology from a highly developed language like Sanskrit. But excepting those subjects, one's style in writing on other ordinary topics should be quite simple. We mean that the words used should be those in common use, and remote constructions in sentences should be avoided; that is to say, it should not happen that a word is used here and another syntactically connected with it is used quite far off. The mutual relations of the clauses in a sentence should be immediately noticeable in reading, and the clauses themselves should be neither lengthy nor involved.

3. Discuss नीतिप्रामाण्य according to नीतिशास्त्रप्रवेश.

10

4. Write a short history of विधवाशिक्षणचळवळ, which is shown in Atinavṛitta by Professor कर्वे.

10

5. Discuss with reference to Cicero the quality of वक्तृत्व described in निवन्धमाळा.

10

6. Explain in Marāṭhi the following :—

20

शिळा-चुंबी लोह भ्रमवि तरि ये तांचि जवळी ।

वळी तैशी माझी मतिहि हरिसे त्यास कवळी ॥

वळी पोथ्यांच्या ह्या तुझि असुररीती शिकवितां ।

वितां व्यर्थें काव्यें अलवण हरीवीण कविता ॥१॥

भगिनीमुखेंचि विनवा तन्मतिला उत्तराचि वळवीळ ।

अतिसहवासिवच मना कतक कलुषिता वना निवळवीळ ॥२॥

तसाचि उरलों कसापतितमी नसे कायकीं ।

कृपाचि सरळी असें हि न घडे जगजायकीं ॥

नसेन दिसलों कसा नयन सर्व साक्षीरवी ।

विषाद धरिळा झणों, न सुरभी विष क्षीरवी ॥३॥

होतोचि प्राप्त मृत्यु स्वमुजबळमदें वचितां अर्णवातें ।

पावे गर्जे उडे तो पतन उडविलें ज्यापरी पर्णवातें ॥

ज्या दुष्ट सजनाचा अकरुणहृदये चितिला घात लागा ।

पाठीं त्याखा न साधू झणति परि अर्धी तो मुखीं घातळा गा ॥४॥

अमृततरसाची धारा घर्माची श्वेतवाह आज्ञापी ।

होय पुढें सैन्यातें ऐसें वर्ता झणोनि आज्ञापी ॥५॥

7. Give the sense of the following in Marāṭhī :—

15

सामाजिक सुधारणेच्या ज्या तत्त्वांच्या अनुरोधाने आहोती संख्या येथे रूढ असलेल्या, राजकीय, धार्मिक किंवा व्यावहारिक संस्थांत फेरबदल करावा, अथवा त्यांपैकी काहीं मुळींच नाहींशा करून त्यांच्या ठिकाणीं नवीनांची स्थापना करावी, असें झगणार, तीं तत्त्वे कोणतीं हें अगदीं थोडक्यांत कां होईना, पण प्रथम सांगितलें पाहिजे. तारवास जसें सुकाणू समुद्रपर्यटण करणाऱ्यांस दिङ्निर्णायक यंत्र, सुवर्णकारास जशी निकषशिला अंधास जशी यष्टी व हमारतीस जसा पाया, तशी सामाजिक रचनेस, अवस्थेस व स्थित्यें तरास हीं तत्त्वे आहेत.

### NEPALI VERNACULAR

*Paper-Setters*—{ PANDIT DHARANIDHAR SARMA, B.A.  
,, BODHBIKRAM ADHIKARI, M.A.

*Examiner*—MR. DHARANIDHAR SARMA, B.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Describe the story of the birth of Sakuntalā and point out the significance of her name. 10

2. Name and explain the eight kinds of Hindu marriage mentioned in *Sakuntalopākhyān*. Comment on Dushyant's marriage with Sakuntalā. 10

3. Fully describe the occasion of the meeting between Pururaba and Urbaśī and show that theirs is a case of love at first sight. 10

4. Write a note on *saṅgamanīyāmani* and describe the part played by it in the drama of *Bikramorbaśī*. 10

5. (a) Write short notes on :— 6

प्रसवन । तिलाञ्जलि । क्षात्रधर्म ।

(b) Use the following words correctly in simple sentences of your own :— 9

वृत्त, घृत, दिन, दीन, सत्य, सत्त्व ।

6. Expand the idea contained in the following :— 10

विचार विद्या विनयादि जानी,  
हृदैन कोही पनि भाग्यमानी,  
यथार्थमा भाग्यभनेर नित्य,  
प्रकारिनेवस्तु छ एक विन्त ।



## 7. Translate into Nepali :—

15

The first quarter of a brāhman's life he must spend as a student during which time he leads a life of abstinence and humiliation. His attention should be unremittingly directed to the Vedas, and should on no account be wasted on worldly studies. He should treat his preceptor with implicit obedience, and with humble respect and attachment, which ought to be extended to his family. He must perform various servile offices for his preceptor, and must labour for himself in bringing logs and other materials for sacrifice, and water for oblations. He must subsist entirely by begging from door to door.

## 8. Write an essay in Nepali on any one of the following subjects :—

20

- (a) Industry.
- (b) The crown and glory of life is character.
- (c) Education—its value and benefits.
- (d) The study of poetry.

## GUJARATI VERNACULAR

*Paper-Setter*—PROF. I. J. S. TARAPOREWALLA, B.A., PR.D.

*Examiner*—PROF. HARGOVIND DAS SETH

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

## 1. નીચે લખેલા વિષયોમાંથી એક પર એક નિબંધ લખો :—

20

- (ક) દેશભક્તિ.
- (ખ) ઉગતા સૂર્યને સૌ નમે.
- (ગ) ભર્યા પશુ મર્યા નહિ.

૨. સ્ત્રીઓને અદ્ભુત તક મળે છે તે તેઓ સમજતી નથી; અને 15  
પોતાના જે ખાસ હક્કનો લાભ છે તે લેવાને બદલે, પુરૂષોના કામ અને જીવનની નકલ કરવા લગ્નનાં બંધનમાંથી છૂટી રહેવા ઈચ્છે છે. આવી ભતના વિચારો અને કાર્યો મનુષ્યજાતિના ભવિષ્યને ખુદી રીતે નુકસાનકારક છે; કારણ આથી આત્મ અને છે કે વધારે સારા વર્ગનાં માતાપિતા મનુષ્યજાતિની હરિત દેહાવવામાં ભાગ ભેતાં નથી, પણ સાવ વધારે અનિચ્છવા યોગ્ય અને આગળ નહિ વધેલાં માતાપિતાના હાથમાં ડોડી દે છે.

ઉપલા ફકરાનો સાર પૂરો સમજવો. એમાંથી લગ્નની આવશ્યકતા આદે સં કશું છે તે લખો.

## ૩. નીચલા અંશોનો શુભાવીમાં અનુવાદ કરો.

15

We all know besides that modern life has of late grown terribly tragic. Disruptive forces at work all the world over have thoroughly depraved our general outlook on life in every possible direction—social, political, economic, or educational; and it is impossible to conceal from ourselves the alarming fact that everything, everywhere in the world, has gone away. All around are seen signs of woe ample enough to show that if humanity is to be saved from the dire evils of our present 'Civilization' drastic changes and modifications should be immediately introduced in our outlook.

૪. તૈલપના કુંવરને કયા પ્રકારની કેળવણી અપાઈ હતી અને તેનાં કેવાં પરિણામો નીપજ્યાં તે કાંઈક વિસ્તારથી લખો.

15

૫. પ્રેમાનંદના કાવ્યોમાંથી તમને કયું ગમ્યું? તે શા માટે ગમ્યું તે લખો તથા તનો હુંકાર આપો.

10

૬. નરસિંહ મહેતામાં ભક્તિરસ પ્રધાન ગણાય છે. એને તમે અનુમોદન આપી શકો છો?

10

અથવા

“અખાના છપ્પામાં ચાખખાનો માર સમાય છે.” આ મતનું સમર્થન કરો.

૭. પૃથ્વી વહ્નભમાં કયો પ્રસંગ તમને વિશેષ હૃદયસ્પર્શી લાગ્યો? તેનું કારણ દર્શાવો.

15

## MALAYALAM VERNACULAR

PAPER-SETTER AND EXAMINER—REV. C. E. ABRAHAM, M.A., S.J.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*Answer Questions 6 and 7 and any other THREE—FIVE questions in all*

1. ഡെറിവേഷൻ പ്രകാരം 'ദൈവം' എന്ന പദത്തിന്റെ അർത്ഥം എന്തായിരിക്കും? 1
2. 'ദൈവം' എന്ന പദത്തിന്റെ ഉത്ഭവം എന്തായിരിക്കും? 1
3. 'ദൈവം' എന്ന പദത്തിന്റെ ഉത്ഭവം എന്തായിരിക്കും? 18
4. 'ദൈവം' എന്ന പദത്തിന്റെ ഉത്ഭവം എന്തായിരിക്കും? 18
5. 'ദൈവം' എന്ന പദത്തിന്റെ ഉത്ഭവം എന്തായിരിക്കും? 18

6. Write an essay on *one* of the following subjects :—

89

(a) ഗദ്യവും പദ്യവും തമ്മിലുള്ള വ്യത്യാസം.

(b) ജീവിതത്തിൽ വിനോദങ്ങൾക്കുള്ള സ്ഥാനം.

(c) ഭാഗ്യച്ചിട്ടികൾ (lotteries) ആസ്തുത മമായസാ  
നാശ്നിക പ്രമാണങ്ങൾക്ക് യോജിച്ചതോ?

(d) സമുദായമെത്രീ കൈവളത്തുന്നതിനുള്ള  
മാർഗ്ഗങ്ങൾ

7. Translate into Malayalam :—

16

Lay hold on your sword, and join in the fight.

Fight, O my brother, as long as life lasts.

Strike off your enemy's head, and there make an end of him quickly : then come, and bow your head at your King's Durbar.

He who is brave, never forsakes the battle : he who flies from it is no true fighter.

In the field of this body a great war goes forward, against passion, anger, pride, and greed :

It is in the kingdom of truth, contentment, and purity, that this battle is raging ; and the sword that rings forth most loudly is the sword of His Name.

Kabir says : ' When a brave knight takes the field, a host of cowards is put to flight.

It is a hard fight and a weary one, this fight of the truth-seeker : for the vow of the truth-seeker is more hard than that of the warrior, or of the widowed wife who would follow her husband.

For the warrior fights for a few hours, and the widow's struggle with death is soon ended :

But the truth-seeker's battle goes on day and night, as long as life lasts it never ceases.'

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## KHASI VERNACULAR

*Paper-Setters*— { MR. ROY ROWLAND THOMAS, M.A.  
RAI SAHEB DOHORY ROPMAY, B.A.

*Examiner*—MR. ROY ROWLAND THOMAS, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Khasi :—

15

I have often been pleased to hear disputes adjusted between an inhabitant of Japan and an alderman of London, or to see a subject of the great Moghal entering into a league with one of the Czar of Muscovy. I am infinitely delighted in mixing with these several ministers of commerce, as they are distinguished by their different walks and different languages; sometimes I am jostled among a body of Armenians, sometimes I am lost in a crowd of Jews, and sometimes make one in a group of Dutchmen. I am a Dane, Swede, or Frenchman at different times, or rather fancy myself like the old philosopher, who, upon being asked what countryman he was, replied that he was a citizen of the world.

2. Compose sentences in Khasi showing the idiomatic use of five of the following :—*Sangrang, Shmain, Ngiah ngiah, Kyr tung, Kyrweng, Bhum bham, Khmia khmia.*

15

3. Write an essay in Khasi on one of the following subjects :—

20

- (a) The League of Nations.  
(b) The relation of the Khasi States to one another and to the British Government.  
(c) The paths of glory lead but to the grave.  
(d) The Shillong-Sylhet motor road.

4. *Either*, Give the substance in Khasi of Zophar's description of the state and portion of the wicked in the twentieth chapter of the Book of Job.

15

*Or*, Briefly describe God's great power manifested in the leviathan, as given in the Book of Job, chapter 41.

5. *Either*, Batai ia ki adong shnong kat kum u nongthoh jong ka Kitab Niam Khein.

20

*Or*, Phi tip aiu na Ka Kitab Niam Khein shaphang ka rukom hiar pateng bad ka kamai Iapduh?

6. Iathuh shaphang ki 10 ksing bad ki 27 sur ki ksing niam kumba phi shem ha ka Kitab Pomblang Nongkrem bad Thang Syiem Sohra.

15

## KANARESE VERNACULAR

PAPER-SETTER AND EXAMINER—MR. P. APPAJI RAO, B.Sc

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following into idiomatic Kanarese :—

15

In the visual perception of the colour of a jar, the intercourse that exists between our eye and the colour has been designated as

*united-inherence.* It is not possible to understand the meaning of this term unless we understand the meaning of inherence. Inherence is an intimate relation between two things which cannot exist separately. Of the two things one exists only as lodged in the other. Such things are the whole and its parts, the substance and its qualities or actions, the community and individuals, and the internal substances and their final particulars. The relation that exists between these things is called *inherence*, e.g., threads inhere in the cloth, colour inheres in the jar, and so on.

2. Narrate briefly the story of of ಸುಭದ್ರಾ ವಿಜಯ ನಾಟಕ 15  
in about two and a half pages.

3. Explain the purpose of ಅಶ್ವಮೇಧ ಯಾಗ. 10

4. Quote a few lines from ರಾಜಭಕ್ತಿ ಕಾವ್ಯ lines which appeal 15  
to you most—and explain why these lines catch your attention.

5. Write an essay on any one of the following subjects :— 20

- (a) The cloth industry in India.
- (b) Air mail services—between provincial towns in India and foreign countries. The air boat as a means of transport.
- (c) Import duties and their effect on the foreign trade of India.
- (d) The Federated India of the near future.

6. Paraphrase fully :— 10

ಒಗೆವ ದೀನೇಶನಂ ಪರಿವಸಿಂಧುವ ನೂದುವ ಗಾಳಿಯಂ ಧಗ |

ಧಗಿಸುವ ಕಿಚ್ಚ ನುಟ್ಟಿ ನೆಲನಂ ಕಜಿವಾಳಕ ನಿರ್ವ ಸದ್ಮಮಂ |

ಸೋಗಯಿಸಿನಿಂದ ಪೆರ್ಮರನ ನುಣ್ಣಿ ಗುಳಂ ಬೆಸಕ್ಕೆವ ತಮ್ಮಮು |

ಬ್ಬುಗಳನೆ ದೈವಮಂದೆಜಗು ವಾತನೆ ದೈವದ ಮೂಡನಲ್ಲನೇ ||

7. ಎಲೈ ಮಹಾಸತ್ತ್ವವುಳ್ಳ ಗೃಧ್ರರಾಜನೇ! ಇದೋ! ನಾನು ಅನುಜ್ಞೆಯನ್ನು ಕೊಟ್ಟಿರುವೆನು. ಇದರಿಂದ ನೀನು, ಯಜ್ಞಶೀಲರಾದ ಗೃಹಸ್ಥರಿಗೆ ಯಾವ ಸದ್ಗತಿ ಯುಂಟೋ, ಅಹಿತಾಗ್ನಿಯಾದ ವಾನಪ್ರಸ್ಥನಿಗೆ ಯಾವ ಸದ್ಗತಿ ಯುಂಟೋ, ಸರ್ವಸಂಗವನ್ನು ಪರಿತ್ಯಾಗಮಾಡಿ ಅರಣ್ಯದಲ್ಲಿದ್ದು ಪುನಃ ಹಿಂತಿರುಗಿ ಬಾರದ ಸನ್ಯಾಸಿಗಳಿಗೆ ಯಾವ ಗತಿ ಯುಂಟೋ, ಐಹಿಕ ಭೋಗಗಳನ್ನು ಬಿಟ್ಟು ನೈಷ್ಠಿಕರಾಗಿರುವವರಿಗೆ ಯಾವ ಉತ್ತಮಗತಿ ಯುಂಟೋ ಆ ಸರ್ವೋತ್ತಮ ಗತಿಗಳೆಲ್ಲವನ್ನೂ ಹೊಂದು ಮತ್ತು ನನ್ನಿಂದ ಸಂಸ್ಕರಿಸಲ್ಪಡುವ ನೀನು ವಿಷ್ಣು ಲೋಕಗಳನ್ನು ಹೊಂದು.

Rewrite the above in your own words. 10

8. Describe in about 150 words any game you like best. 5

## TAMIL VERNACULAR

*Paper-Setters*— { RAO BAHADUR L. K. ANANTHAKRISHNA IYER,  
B.A., L.T.  
MM. VEDANTAVISARAD ANANTAKRISHNA SASTRI

*Examiner*—MM. VEDANTAVISARAD ANANTAKRISHNA SASTRI.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*Answer only SIX questions. Question 9 must be answered*

1. கம்பராமாயணத்தினை யொட்டி மந்தரைகேசயிப்பிராட்டியா 15  
ரிடம் இராமப்பிரானின் முடிசூட்டத்திடுத்து உரைத்தபாடல்களின்  
இரண்டை எழுதி அவற்றின் கருத்தை விளக்கச்செய்யவும்.
2. சலிசம்பரின் வரலாற்றைவரைத்து கம்பராமாயணத்தின் மேன் 15  
மைக்குத்தக்க சில காரணங்களை எழுதுக.
3. அயோத்தியா காண்டத்தின் வரலாற்றை கருக்கமாய் எழுதி 15  
இரண்டு மூன்று படலங்களின் திருமாமங்களும் அவற்றின் காரண  
ங்களும் பாவையென விவரிக்குக.
4. திருவள்ளுவர் சிறையிலித்து கற்றுக்கொண்ட கடைமைகள் 15  
பாவை?
5. அடியிற்சேண்ட சொற்களின் பொருளை யெழுதி விசுப்ப 15  
ப்படி இரண்டுசெற்கண்டக்கிய குறையப்பாக்களையும் முன்பின்  
அநிகாரங்களின் திரு காமக்களையம் எழுதவும் :—  
(அ) நிற்றினம்; (ஆ) ஆற்றின்; (இ) ஞாலம்; (ஈ) முறண்.
6. (அ) தம்மித் பெரிதார் தமராவொழுதுதல் 15  
வன்மைபுனெல்லாம் தலை.  
(ஆ) துண்பாணுற்று புலயில்லாநெழினவ  
மண்மாண் புனைபாவையற்று.  
(இ) இவற்றின் கருத்தை பதவுரை தெளிவுரைகளுடன்  
விளக்கவும்.

7. தமிழகமும் கைத்தெழிலும் அல்லது கல்வியின் தூய்மை 15  
யும் இத்து தேசமும் என்பதை யொட்டி ஓர் நீண்ட விபரணமெழு  
துக.

8. 40. 41. 42. 43. 44. 47. இவ்வதி காரங்களின் திருநாமங்களை 15  
யும் ஒன்றன்பின் மற்றொன்றை வைக்க காரணங்களையும் விவரி  
க்கவும்.

9. Translate into Tamil :—

25

#### *Rustom's Childhood*

Rustom grew very quickly in body and mind. When only eight years of age he had almost the appearance of a man. The father and mother watched the growth of their son with pride. The grand-parents also took a deep interest in their first grandson, and heard of his boyish exploits with joy and gratitude. The boy, indeed, promised to be a prodigy.

During his boyhood the grandparents on both sides came to visit Zal and see Rustom with their own eyes. They viewed with satisfaction his bodily strength, and the boyish skill that he showed in martial exercises. The wise warrior, Sam, prayed that Rustom might grow up humble in mind as well as great in deeds; that he might use his strength in the cause of good and never become a tyrant.

### TELUGU VERNACULAR

Paper-Setters— { PROF. SIR S. RADHAKRISHNAN, KT., M.A.,  
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Examiner—DR. B. RAMACHANDRA RAU, M.A., PH.D.

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

1. Translate the following passage into idiomatic Telugu :—

20

Nay, nay, my husband, didst not thou entreat  
That I remain behind in opulence.  
But that were shame upon a woman's head.  
I've followed but the impulse of my heart,  
Home, comfort, wealth—without thee they were dust.  
It is my happiness to share thy fate.  
But cheer thee and look heavenward. All night  
I stayed in prayer in the Mother's shrine.  
And now, towards early morn, I found response.  
Sweet, heavenly voices spake unto my soul  
Only a short spell and our woe is o'er.  
Look up, have courage, let the man, the king,  
Show all his manhood and his dignity.  
Now I must go, the day is on the wing,  
Perchance I find employment before eve.



2. లలితకళలననేమి? వాటినభివృద్ధి చేయు విషయము విపులముగా వ్రాయుడు. 20

3. శ్రీ రాముని వనవాసమువలన గ్రహించు నీతులెవ్వయో 20.  
మీ స్వంత మాటలందు పొందుపరిచి వ్రాయుడు.

4. ఈ క్రింది పద్యమునకు తాత్పర్యము వ్రాయుడు:— 10.

మానిసికి నున్న దేదైన లేనిదగును  
లేనిదే యుండదగినది; లేనిదాని  
కేడ్వదగినది యుండి లేకేడ్పులేక  
లేకయేడుపెబ్రతుకగు లోకమందు.

5. “స్త్రీ సారథంత్రయము” దాని వలన గలుగు లాభ నష్టములు 20.  
గురించి వ్యాసము వ్రాయుడు.

6. “కాలు జాతిననగువారు కారెయ్యెరులు” అను న్యాయోక్తి నుదహరించుచు రెండు పేజీలు తక్కివ లేకుండా వ్యాసము వ్రాయుడు. 10.

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## MODERN TIBETAN VERNACULAR

*Paper-Setter and Examiner—DR. SATKARI MUKHERJEE, M.A.,  
Ph.D.*

*Candidates are required to give their answers in their own  
words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passage into English:—

40

(a) ཀྱེས་ལ་བཞེ་བ་དག་ལ་གསེལ། རབ་ནི་ཚེས་ཀྱི་ཕྱག་པ་ལྟེ། འབྲིང་ནི་དཔལ་  
དང་ལང་ཚེས་ཕྱག། ག་མ་རྩོད་གྱིས་ཕྱག་པ་ལགས། མཚོག་ནི་སློ་གྲོས་ནོར་དང་ལྡན།  
འབྲིང་ནི་དད་པའི་ནོར་དང་ལྡན། ག་མ་རྩོད་ཆིང་ནོར་དང་ལྡན། ད་ཕྱིར་ཀྱེས་བྱ་དེ་ཉིད་ལ།  
མཚོག་དང་འབྲིང་གི་ཡོན་ཏན་མངའ། ཡོན་ཏན་ག་མ་མེད་ཀྱང་སྟེ། དེ་སྟེང་མེད་ཀྱི་འབྲིང་བ་  
འཇངས། ཞེས་སྟེས་སོ། དེ་ནས་བྱ་མོ་ལ་ལ་བ་ཀྱིས་བསྟུབ་བྱ་དང་རྩོང་བ་ལེགས་པར་གནང་  
ལྟེ་ཁྱ་ར་ཁྱ་སེར་བདད། ལ་བ་ཉིད་སྟུན་དང་ས་ཀྱང་མ་གཞིགས་མར་རྒྱབ་ཐོགས་སུ་ཡོག་  
གོ། མ་དེ་མ་དུ་ནི་ཁྱ་ར་ཁྱ་སེར་ལེགས་ཏེ་བཅུན་མོ་དམ་པར་མངའ་གསོལ་བས། དེ་ཉིད་  
ལྟར་ཁྱ་སེར་བསྟུབས་པ་ནས་བརྟུང་ལྟེ། ཀྱེས་པོ་དེ་མངའ་མང་སྟར་ལས་ཆེས་ཤིན་ཏུ་ཀྱེས་  
པར་གྱུར། ཀྱེས་པོ་དང་བཅུན་མོ་དམ་པ་དེ་གཉིས་ཀ་དང་པ་དང་གཏོང་ཡོད་དང་། རོ་ཆ་  
ཁྱེས་ཡོད་སོགས་ལ་རབས་ཀྱི་ཡོན་ཏན་མ་ཆད་བ་མེད་པས་ཕྱག་ཅིང་། རྟེན་གྱི་ཐམས་ཅད་ཀྱི་  
རིགས་ལྡན་ཀྱེས་པོ་ལ་བ་ལུས་ཤེས་བསྟུགས་པའི་ལུས་དམ་པར་གྱུར་པ། འབངས་ནམས་  
ཀྱང་ལམ་མོ་ཆེ་དེ་གཉིས་ཀྱི་ཡོན་ཏན་གྱི་རྗེས་སུ་འགྲོ་བ་འབའ་ཞིག་བྱང་ངོ།

(b) ཀྱེས་པོ་དེ་བསྟུང་བྱ་འབངས་ཡིན་ན། རྟེས་མེད་ཁྱིམ་མ་གྱིས་ག་ལ་མནར།  
འབངས་ཀྱིས་བསྟུང་བྱ་ཁྱིམ་མ་ཡིན་ན། གཞི་མེད་ཕྱ་མ་ཅི་ཕྱིར་འཇུག། བཅུན་མོ་དེ་བསྟུང་  
བྱ་ལུས་ཡིན་ཀྱང་། ལུས་ལས་ཉམས་པ་ངས་མི་དུན། གལ་དེ་རྩ་ལོ་ཀྱེས་ལ་བྱ་དུ། མཆིས་  
ནས་དང་ལ་ཐུག་གི་བར། རྟེས་པ་ལ་ལུག་ལྷག་ལྟེ་ཆོས་ལ། ཡིད་ལ་དུང་པ་འང་མ་བཅིས་ན།  
ནང་པར་མ་ཐུ་མེས་པོ་ལས། སྟུ་གྱ་ཐོན་པོ་རྟེན་གྱི་ཅིག། དཀོན་མཚོག་རྩ་ལོ་བཞེད་པ་དང་།  
དེན་འབྲེལ་ཟབ་མོས་བསྟུ་མི་ཕྱིད། གལ་དེ་བདག་ཆོག་འདི་བཞེད་ན། བཞེད་པའི་ཆོག་འདི་  
འབྱུབ་གྱུར་ཅིག།

2. Write in Modern Tibetan a short account of the course of  
Kala Wangpo's life after Drowa-Zangmo's disappearance. 10

3. Give the diminutives of the following words with a statement of the relevant rules :— 10

མོ། མག་པ། མད།

4. Write a short letter in Tibetan, requesting the Phari Zong-pon to supply five transport animals and four coolies for a journey to Gyantse. 10

5. Write an essay on one of the following subjects :— 30

(a) 'The factors of progress for a nation.

(b) The ancient civilization and culture of Tibet and the need, if any, of modernization.

### BURMESE VERNACULAR

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. စနေနံဆင်မင်းဝတ္ထုကိုထောက်၍၊ ဦးပုညသည်ဝတ္ထုရေးရာ၌မည်သို့စွမ်းသည်။ မည်သို့မျိုးစွမ်းထိုက်သည်ဟုကော်ပြပါ။ 10

2. အောက်ပါစာပိုဒ်ကို သည်မည်သည့် စာကိုယ်နှင့်စပ်ဆိုင်သနည်း။ ၎င်းတို့၏အဓိပ္ပာယ်ကိုသင့်စကားဖြင့်ရေးပါ။ 30

(က) သန္တာတကျေး၊ ယုန်သွေးတ၍၊ ကောဝိနာပွင့်၊ ဈာတျာရင့်သော၊ ကြက်မင်းဥဏှောင်၊ ပန်းရောင်တွင်လွင်၊ လောယိထင်မဏိရတ်၊ တွတ်တွတ်နီမြန်း၊ မင်ဆခန်းအသား၊ ပတ္တမြားကျောက်ဖွန့်၊ ယိန်းထန်သပြာ၊ ကမ္ဘာလှူန်းသင်၊ တကျွန်းဖြစ်ဖြင့်၊ ဝန်းရပ်ပတ်၍၊ ရံသကဲ့သို့၊ စက္ခုဗြညာဏ်ထည်းတူသောဝတ်ရက်ယူသတ္တဝါ၊ ငှက်ထိပ်ပြာတို့၏၊ နားရာပြီပြီ၊ ရှုစေသော၊ ကြာနီစတာတထင်။

(ခ) ကျွန်တိုင်းဝတ်ငွေ၊ တွတ်မျှကြွေအောင်၊ နတ်ထေမောင်းနှင့်၊ ညာညောင်းကျင်တို့၊ ဂေါ်အင်ကြင်းခိုင်၊ တသင်းယေကြိုင်သည်၊ ဂနိင်ဝံတို့၊ ငုံအပူနှင့်၊ ထိုသည့်ခါ၌၊ လရာယိဗွာ၊ ထွေထိဂံရတ်၊ တွန်းရွှေရုပ်တို့၊ ဆောင်မုတ်ယွန်းဖြေ၊ ညောင်ကွမ်းဗွေတွင်၊ တွမ်းစေမိန်သား၊ ကျွေရွှေမားနှင့်၊ ငွေငါးမန်းထိုင်၊ မီးရေယစိုက်၊ အောင်ဗျာထိုက်က၊ ဝန်းဝိုက်ကယ်ဆိုင်သည်၊ ဗျာထိုင်ကြွေမြေကျွန်းထော့တယ်။

(ဂ) မိုးပေါ်မှာနေနှင့်လက်၊ လူ့ပြည်ကရမ်းနှင့်၊ ကြိုးစား  
 ချီလှမ်းသော်လည်း၊ ပင်ပန်းကာရံအကျ။ ဗြဟ္မာကတစင်းအပ်၊ လူ့  
 ရပ်ကအပ်သွား၊ ချလိုက်လျှင်ငြားတန်၏။ ကံပုညသန္တာ၊ ဆယ်ထိခြောက်  
 ရွေးထပေမှာ၊ ဝဲထီးခြမ်းရွေးကွာလျက်၊ သမုဒ္ဒရာနှင့်နားခြေရာ၊  
 ကေသရာနှင့်ဘားတလက်၊ ဝက်သားနှင့်ငါးပိပုတ် . . . မဆိုင်တဲ့  
 နေရာမှာ၊ အနာပေါက်ချက်မကျသတဲ့သို့။

3. အောက်ပါစာပိုဒ်၏အဓိပ္ပါယ်ကိုသင့်စကားဖြင့်ရေးပါ။ 15

နတ်မျှနေရာ၊ သီတာရွှေနေ့ကံ၊ ဆိုက်ရောက်သတော်၊ မော်  
 ဓောဦးစွန်း၊ ကျွန်း၏အချာ၊ ရာဇာရာဇ၊ မြို့မျှဒူးမှန်ကင်း၊ မင်း  
 ၏နေရာ၊ ဟင်သာယာသည်၊ ရွှေပြည်အောင်ခန်း၊ ဘုံဖြင့်နန်းက၊  
 ထောင်းစွန်းနွေဦး၊ ချီခွဲကျူးသော်၊ ရပ်ထူးမြေတာ၊ ပြည်ထင်  
 သာဝယ်၊ အထာသသင်၊ ထွန်လျှင်ကဆုံ၊ ငေ့သွန်းကြိုက၊ ပည်း  
 ဗိုခြင်းရာ၊ ပန်းတကာထက်၊ သိင်္ဂါရွှေလျှံ၊ ဝတ်ဆံမီးမီး၊ သား  
 သားချိုးတံ၊ ရွက်ရံတဖြိုင်၊ မိုင်လည်းတမျှ၊ အလှနတ်တူ၊ ပြိုင်သူမဲ့ရာ၊  
 မိုးသူဇာနှင့်၊ ဒေဝါသကြား၊ လက်ညှံတွားဖြင့်၊ သနားထွတ်ကြင်၊  
 ပန်စေချင်၍၊ ရွှေစင်ထည့်၊ ကိုးမြှောင်သိသို့၊ အာနိမင်းစံ၊ ရဲရဲလျှံသား၊  
 ဝတ်ဆံရွှေလျှော်၊ လှမျိုးကျော်သည်၊ ကွံကော်ပွင့်စနေကာလ။

4. Translate into Burmese :—

15

It is sometimes said that education can never make any man better. This is only true if education be taken in that narrow sense, in which it is not infrequently used, which applies it only to the training of the intellect. But it is not true of education which seeks for its end not only the training of intellectual ability, but also the production of character. There are three great results which will follow from this education, where it has been really successful. The first is, the capacity to see a thing as it really is, a capacity which is as yet none too common; the second is the resolve to do whatever has to be done as well as it possibly can be done, and this is a common result of our present education, though it is often unenlightened; the third is to live life by right values, by seeking truth because there is such a thing as knowledge, and by seeking goodness because there is such a thing as virtue.

၆. သပြေထွတ်ခွန်၊ ရွှေမင်းဝံထောင်၊ ကျွန်းညွန့်သောင်တက်၊ 10  
 စောင်စောင်ရွှေနှင်း၊ ငြင်းပိုင်ထွန်းသို၊ သွန်းထွန်းရောင်ထို၊ ကိုး  
 ဈာန်စုံစုံ၊ မိုင်းဆုံနတ်ထူ၊ ထည်ထောင်မူသည်—

ဇာတက်ပါလင်္ကာတွင်ပါရှိသည့်ဥပမာစကားကိုထုတ်ပြပြီးလျှင်၊  
 ၎င်းစကားဥပမာအနက်၊ ဥပမာအနက်၊ ဥပမာအနက်သုံးမျိုး  
 ထိုလိုပုံစံကောက်ယူ၍ ၎င်းတို့၏အဓိပ္ပာယ်ကိုရှင်းလင်း  
 ဖော်ပြပါ။

၇. အောက်ပါအကြောင်းအရာတစ်ခုခုကိုစာဖတ်ရေးသားပါ။— 20

(က) အနောက်နိုင်ငံသို့သွားရောက်ပညာသင်ကြားခြင်း၏အ  
 သက်သာခြင်း။

(ခ) ရာဇဝင်သင်ကြားခြင်း၏အကျိုးကျေးဇူး

(ဂ) ထေယျာဉ်ပျံအကြောင်း။

## ALTERNATIVE PAPER IN ENGLISH

### GROUP A

Paper-Setters— { PRINCIPAL HERAMBACHANDRA MAITRA, M.A.,  
 D.Litt.  
 RAI LALITMOHAN CHATTERJEE, BAHADUR, M.A.

Examiners— { REV. G. H. C. ANGUS, M.A., B.D.  
 PROF. HERAMBACHANDRA MAITRA, M.A.,  
 D.Litt.

Full marks—50

*Candidates are required to give their answers in their own  
 words as far as practicable*

*Out of this group answer Question 5 and any THREE of the others*

*The questions are of equal value*

1. What light does the career of Cardinal Manning throw on the spirit  
 of his age?

2. 'What we must look for here is first, religious and moral prin-  
 ciple; secondly, gentlemanly conduct; thirdly, intellectual ability.' Show  
 that Dr. Arnold's scheme of education at Rugby was an attempt to  
 achieve these ends.

3. Draw a pen-picture of Florence Nightingale among the wounded soldiers in the Scutari hospitals.

4. Comment on the conduct of Gladstone towards General Gordon in connexion with the sending of a relief expedition to Khartoum.

5. Explain, in the light of the context, *two* of the following :—

(a) 'Poor Newman!' he once exclaimed in a moment of genial expansion. 'Poor Newman! He was a great hater.'

(b) The blowing up of the palace would have, he thought, 'more or less the taint of suicide,' would be, 'in a way, taking things out of God's hands.'

(c) He would treat the boys at Rugby as Jehovah had treated the Chosen People; he would found a theocracy; and there should be judges in Israel.

### GROUP B

Full marks—50

*The figures in the margin indicate full marks*

6. Present, in your own words, the central thought of **EITHER** 15  
*Ode to Duty OR Nature and the Poet.*

7. Give the substance of any *two* of the following poems :— 15  
*Gird on thy sword; Within King's College Chapel, Cambridge; Youth and Age; The Terror of Death.*

8. Explain *four* of the following with the context :— 20

(a) Our song is the voice of desire, that haunts our dreams,  
A throe of the heart,  
Whose pining visions dim, forbidden hopes profound,  
No dying cadence nor long sigh can sound,  
For all our art.

(b) Thanks to the human heart by which we live,  
Thanks to its tenderness, its joys and fears,  
To me the meanest flower that blows can give  
Thoughts that do often lie too deep for tears.

(c) On a poet's lips I slept  
Dreaming like a love-adept.

(d) Sun-girt City! thou hast been  
Ocean's child, and then his queen;  
Now is come a darker day,  
And thou soon must be his prey  
If the power that raised thee here  
Hallow so thy watery bier.

(e) Perhaps the self-same song that found a path  
Through the sad heart of Ruth, when, sick for home,  
She stood in tears amid the alien corn.

(f) Thou liest in Abraham's bosom all the year,  
And worshipp'st at the Temple's inner shrine.

## SANSKRIT—HONOURS

## FIRST PAPER

*Paper-Setters—* { PROF. D. R. BHANDARKAR, M.A., PH.D.  
MR. KOKILESWAR SASTRI, M.A.  
MAHAMAHOPADHYAY ASUTOSH SASTRI, M.A.  
DR. PRABHATCHANDRA CHAKRABARTI, M.A., PH.D.  
„ SURENDRANATH DASGUPTA, M.A., PH.D.  
MR. BIHARILAL BANERJEE, M.A.

*Examiners—* { MR. BHABESCHANDRA BANERJEE, M.A.  
„ BIHARILAL BANERJEE, M.A.  
„ NILMONI CHAKRABARTI, M.A.  
„ NALINIMOHAN SASTRI, M.A.  
„ SATYENDRANATH SEN M.A., M.L.A.  
„ LAKSHMINARAYAN VEDA-SASTRI, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English one only of the following groups :—

12

## GROUP A

- (a) नवानघोऽधो बृहतः पयोधरान् समूढकपर्परागपाण्डरम् ।  
क्षर्गं क्षगोत्क्षिप्तगजेन्द्रकृत्तिना स्फुटोपमं भूतिसितेन शम्भुना ॥
- (b) षाड्गुण्यमुपयुज्योत शक्तपेक्षो रसायनम् ।  
भवेदस्यैवमङ्गानि स्थास्तुनि बलवन्ति च ॥

## GROUP B

- (a) स्मरत्यदो दाशरथिर्भवन् भवानमुं वनान्ताद् वनितापहारिणम् ।  
पयोधिमावध्य चलजलाविलं विलङ्घ्य लङ्घं निकषा हनिष्यति ॥
- (b) तीक्ष्णा नारुन्तुदा बुद्धिः कर्म शान्तं प्रतापवत् ।  
नोपतापि मनः सोष्म वागेका वाग्मिनः सतः ॥

(i) Comment grammatically on :—

10

पयोधरान्, अघोऽधः, क्षर्गं, शम्भुना, and हनिष्यति ।

(ii) Derive नारुन्तुदा and षाड्गुण्यम् ।

2

2. उदीर्णरागप्रतिरोधकं जनैरभीक्ष्णमधुष्णतयातिदुर्गमम् ।  
उपेयुषो मोक्षपथं मनस्विनस्त्वमग्रभूमिर्निर्णयसंश्रया ॥

Explain the above *śloka* fully in Sanskrit.

10

(a) Derive उपेयुषः and decline its base in the nominative case in all genders.

4

(b) Name and expound the *samāsas* in मोक्षपथम् and उदीर्णराग-  
प्रतिरोधकम् । 3

3. विजयस्त्वयि सेनायाः साक्षिमात्रेऽपदिश्यताम् ।  
फलभाजि समीक्ष्योक्ते बुद्धेर्भोग इवात्मनि ॥

Explain the simile contained in the above *śloka*, with special reference  
to the philosophical doctrine contained in it. 6

4. Explain any *five* of the following :— 10

ब्रह्माक्षुब्धिः, पाकयज्ञः, उपकुर्वाणः, समयाध्युषितः, ब्रह्मतीर्थम्, प्राक्कुलान्,  
and उपवीती ।

5. Translate any *two* of the following extracts into English :— 10

(a) यश्चैतान् प्राप्नुयात् सर्वं यश्चैतान् केवलांस्त्यजेत् ।

प्रापणात् सर्वकामानां परित्यागो विशिष्यते ॥

(b) धर्म्मार्थानुच्यते श्रेयः कामार्थौ धर्म्म एव च ।

अर्थ एवेह वा श्रेयस्त्रिवर्ग इति संस्थितिः ॥

(c) नाभिव्याहारयेद् ब्रह्म स्वधानिनयनादृते ।

शूद्रेण हि समस्तावद् यावद् वेदे न जायते ॥

6. We may be begged from by a *brahmarāṣin*, and when can he take  
his meal from one person only—with what restriction? 8

7. Translate into Sanskrit :— 25

(a) Much enraged he was about to kill him with his huge paw, but the wee little creature begged for mercy. In a piteous tone the mouse said, 'Please do not kill me. Spare me now and I will some day repay your kindness.' The lion laughed to hear that a mouse could ever come to his help, but let him go. Very soon after this, the lion, when wandering about in search of prey, was caught in a net that had been spread in the forest to catch him.

(b) The queen rose one hour before daybreak to say her morning prayers, and performed the customary ceremonies. She then heard the sacred books of her faith read for a fixed period, distributed alms, and gave food in person to a number of Brāhmanas. After breakfast she took a short repose, after rising from which, and dressing herself, she went about two o'clock to her *darbar*.



## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Write down an account of the sham quarrel which king Candra Gupta picked with his minister Cāṇakya as given in the third act of the *Mudrā-Rākṣasam*, and show the bearing of this quarrel on the subsequent development of the drama. 10

*Or, (a)* Who is Candana Dāsa? Describe the nature of the selfless devotion displayed by him towards Rākṣasa, stating how it involved him in great trouble. What was it which eventually brought him out of danger? 10

(b) How and by whom was the signet ring of Rākṣasa stolen? Name the profession which gave the man, who stole it, unquestioned admission into the female quarters everywhere.

2. 'The introduction of Durvāsas's curse serves an important dramatic purpose in the *Abhijñāna-Sakuntalam*.' Explain. 5

3. Explain *either* in Sanskrit or in English any two stanzas, selecting one only from each of the following groups, with reference to the context in each case :—

## GROUP A

- (a) पादस्याविर्भवन्तीमवनतिमवणे रक्षतः स्वैरपातैः  
संकोचेनैव दोष्णां मुहुरभिनयतः सर्व्वलोकातिगानाम् ।  
दृष्टिं लक्ष्येषु नोप्रां ज्वलनकणमुचं बध्नतो दाहभीते-  
रित्याधारानुरोधात् त्रिपुरविजयिनः पातु वो दुःखनृत्यम् ॥
- (b) नेदं विस्मृतभक्तिना न विषयव्यासङ्गमूढात्मना  
प्राणप्रच्युतिभीरुणा न च मया नात्मप्रतिष्ठार्थिना ।  
अत्यर्थं परदास्यमेत्य निपुणं नीतौ मनो दीयते  
देवः स्वर्गगतोऽपि शास्त्रवधेनाराधितः स्यादिति ॥

## GROUP B

- (a) किं तावद्भतिनामुपोढतपसां विघ्नैस्तपो दूषितं  
धर्म्मरक्षणचरेषु केनचिद्भुत प्राणिष्वसत्त्वेष्टितम् ।  
आहोस्वित् प्रसवो ममापचरितैर्विष्टम्भितो वीरुधां  
इत्यारूढबहुभ्रतकर्मपरिच्छेदाकुलं मे मनः ॥
- (b) काच्यं सैकतकीनहंसमिथना क्षोतोवहा मालिनी  
पादास्तामभितो निषण्णहंरिणा गौरीगुरोः पावनाः ।  
शास्त्रालम्बितवल्कलस्य च तरोर्निर्मलामिच्छाम्यधः  
शङ्गे कृष्णमृगस्य वामनयनं कण्डूयमानां मृगीम् ॥

(i) The extract (a) under Group A is said to foreshadow the crooked policy on which the plot of the play is based. Show how it does so. Who speaks extract (b)? What do the words इदं and देवः therein refer to? Is there any difference in meaning between शासक and राजा ?

(ii) In extract (a) under Group B, expound the compound चर्मारण्य, noticing the peculiarity, if any.

Can you quote a parallel stanza from any other well-known work of Kālidāsa which gives a sense exactly similar to the sense contained in the last line of stanza (b)?

4. Translate into English any two of the following extracts :—

- (a) मुहुर्लक्ष्योन्नेदा मुहुरधिगमाभावगहना  
मुहुःसम्पूर्णङ्गी मुहुरतिकृशा कार्यवशतः ।  
मुहुर्नश्यद्बीजा मुहुरपि बहुप्रापितफले-  
त्यहो चित्ताकारा नियतिरिव नीतिर्नयविदः ॥
- (b) अभ्यक्तमिव स्नातः शुचिरशुचिमिव प्रबुद्ध इव सुसम् ।  
बद्धमिव स्वैरगतिर्जनमिह सुखसङ्गिनमवैमि ॥
- (c) अधरः किसलयरागः कोमलविटपानुकारिणौ बाहू ।  
कुसुममिव लोभनीयं यौवनमङ्गेषु सज्जदम् ॥

5. Either,

लेखीऽयं न ममेति नोत्तरमिदं मुद्रा मदीया यतः  
सौहार्दं शकते न खण्डितमिति श्रद्धेयमेतत् कथम् ?  
मौख्ये भूषणविक्रयं नरपतौ को नाम सम्भावयेत् ?  
तस्मात् सम्प्रतिपत्तिरेव हि वरं न ग्राम्यमत्रोत्तरम् ॥

There are, in the above stanza, references to a written document (लेखः) and sale of ornaments (भूषण-विक्रयः), among other things. Write in detail what you know of this document and the ornaments.

Or,

त्यजत्यप्रियवत् प्राणान् यथा तस्यायमापदि ।  
तथैवास्यापदि प्राणा नूनं तस्यापि न प्रियाः ॥

State specifically what sort of plot चाणक्य was cogitating in his mind, as indicated in the above stanza; and state also how in the sequel of the drama the plot was practically matured, and to what momentous consequence it led.

6. Expand in your own words in English the fundamental thoughts contained in any three of the following extracts :—

- (a) किमिव हि मधुराणां मण्डनं नाकूलीनाम् ?  
(b) पुरन्ध्रीणां प्रज्ञा पुरुषगुणविज्ञानविमुखी ।

- (c) उत्सर्पिणी खलु महतां प्रार्थना ।  
 (d) गतिः सोच्छ्रायाणां पतनमनुकूलं कलयति ।  
 (e) व्यूढं हि प्रतिपन्नवस्तुषु सतामेतद्धि गोत्रव्रतम् ।  
 (f) विघ्नैः पुनः पुनरपि प्रतिहन्यमानाः  
 प्रारब्धमुत्तमजना न परित्यजन्ति ।

7. With reference to your text, prove any *two* of the following :—

5

That Kālidāsa—

- (a) flourished in the midst of abundant agricultural prosperity in the country ;  
 (b) was acquainted with both the civil and criminal laws of his day ;  
 (c) was a keen and careful observer of natural phenomena.

8. *Either*, (a) Reproduce from the *Abhijñāna-Sakuntalam*, in your own words *either* in Sanskrit or in English :— 4

*Either*, (i) The impressive description of the various changes brought upon the physical features of a charming damsel, when her mind is worked into a righteous indignation.

Or, (ii) The beautifully faithful description of daybreak upon a hermitage, as put in the mouth of one of Kaṇva's disciples.

Or, (b) Write down the double senses of the following verse :—

फलयोगमवाप्य सायकानां विधियोगेन विपक्षतां गतानां ।

न शुचेव भवत्यधोमुखानां निजतूणीशयनव्रतं प्रतुष्टेय ॥

9. Translate into Sanskrit :—

25

(a) Beautiful and gifted was the royal maiden Sāvitrī. And yet, at the mention of her name, the world thought only of her holiness. She had come to her parents as the spirit of prayer itself. For the marriage of her father Ásvapati and his queen had for many years been blessed with no children, which thing was a great sorrow to them. And they were now growing old. But still, daily, the king lighted with his own hands the sacrificial fire and chanted the national prayer, and begged of the gods that even yet he might have a child.

- (b) The enemies which rise within the body,  
 Hard to be overcome—thy evil passions—  
 Should manfully be fought ; who conquers these  
 Is equal to the conqueror of worlds.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. (a) Enumerate the ways in which transformations of cases occur when a verb is changed into the causative; and explain clearly the exceptions, if any, with reasons. State the circumstances under which a णिजन्त verb is changed into *ātmanepada*. Explain clearly with illustrations. 14

(b) Define एकदेशिसमास and explain fully its conditions, with suitable examples 6

2. Explain clearly the conditions in which the roots वद्, स्या, कृ and दा take *ātmanepada*, and furnish suitable examples. 10

3. Correct or justify, stating reasons, any four of the following :— 10

- (a) मत्स्योदके अनुस्यन्देते ।
- (b) भवन्त एव लोकवृत्तान्तनिष्णाताः ।
- (c) विस्माययन् विस्मितमात्मवाचा ।
- (d) शूद्रैव भार्या शूद्रस्य ।
- (e) द्विवर्षी स्त्री ममेयन्तु ।
- (f) सूर्योदयमारभ्य अस्त्रमयात् पति ।
- (g) करस्य करभो बहिः ।

4. Translate any two of the following passages into English :— 30

(a) अथ वासवदत्तायाः प्राणेश्योऽपि गरीयसी सर्वविश्रम्भपातं कलावती नाम सखी कन्दर्पकेतुमुवाच—“आर्य्यपुत्र, नायं विश्रम्भकयानामवसरः । अतो लघुतरमेवाभिधीयते । त्वत्कृते यानया यातनानुभूता सा यदि नभः पत्तायते, सागरो मसीपात्तायते, ब्रह्मा लिपिकरायते, भुजगपतिर्वा कथकायते, तदा किमपि कथमप्यनेकैर्युगसहस्रैरभिलिख्यते कथ्यते वा” ।

(b) त्वया च राज्यमुज्झितम् । किं बहुना आत्मात्माः संकटे समारोपितः । यैषास्मत्स्वामिदुहिता प्रभातायां शर्ष्वर्यां पिता यौवनातिक्रमदोषशङ्किना हठेन विद्याधरचक्रवर्तिनो विजयकेतोः पुत्राच्च पुष्पकेतने पाणिग्रहणेन दातव्या इति निश्चिता । अनया चार्च्ययास्माभिः सह संमन्त्रालोचितम्—“अद्य यदि तं जनमादाय नागच्छति तमालिका तदावश्यमेवाभयाशः आभयितव्यः । सुकृतवशाच्च महाभागः समागतः । तद्वत् यत् साम्प्रतं तन्न भवानेष प्रमाणम् ।

(c) अथैकदा विजृम्भमाणसहकारकोरकनिकुरम्भनिपतितमधुकरमाळा-  
मदस्रश्चरहुं कारजनितपथिकजनसंज्वरः कोमलमलयमारुतोद्धृत-चूतप्रसवरसा-  
स्वादकषायकण्ठकण्ठकुहुरुतभरितसकलदिङ्मुखः विकचमलयषण्डनिलीय-  
मानमत्तकलहंसकुलकोलाहलमुखरितसकलसरोवरः सत्पुरुष इव दोषानुबन्ध-  
रहितः सुराजेव समृद्धकुवलयः नागरिक इव विवर्जितसुखाशः विट इव  
अम्बानसुभगः वसन्तकालः आजगाम ।

(d) अथोत्थिते तस्मिन्नवनीश्वरे युगपदहमिकाक्षेपेण प्रणम्य निर्गच्छतो  
नरेन्द्रसन्दोहस्य महोयसा गात्रसंघट्टेन हठादन्योन्यमिलितमुकुटमकरातयो-  
न्मलितैरनेकशो मणिभिः सरस्वोद्गारो वेलाम्रसर इव सागरस्य प्रसर्पतो  
विलासिनीकदम्बकस्य क्वनत् किङ्किनी चक्रवालकलकलैरुत्थितजनारवा  
प्रतीहाररक्षास्तवकितेन च बन्दितेनोदीर्यमाण जयजयालापकोलाहलकलापेन  
संमृतो बभूव भूयसा विस्तरेण महानास्थानसंक्षोभः ।

5. Either, Discuss the position of the *Purāṇas* in Indian literature. 15

Or, Discuss the history of the development of Sanskrit lyric poetry.

6. Either, Discuss the question of foreign influence on Sanskrit 15  
dramas.

Or, Estimate the position of Bhāsa among the Sanskrit dramatists.

Or, Trace the history of the growth of the Buddhist literature in Sanskrit.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English either (a) or (b) :— 14

(a) वज्रामिघातैरविरुग्णमृत्तेः फेणैर्जलानामसुरस्य मूर्ध्नः ।

चकार भेदं मृदुभिर्महेन्द्रो यथा तथैतत् किमपीति बोध्यम् ॥

(b) क्व क्वीविसङ्गाः करजाः क्व वक्षो दैत्यस्य शैलेन्द्रशिखाविशालम् ।

संपश्यतैतद् शुषदां सुनीतं बिभेद तैस्तन्नरसिंहमूर्तिः ॥

Explain the special significance of फेणैर्जलानां in (a) and the force of क्व—क्व in (b). Explain grammatically शुषदां in (b).

2. Refer to the context and give the substance of either of the 11  
following :—

(a) और्ख्यं त्यजेन्मध्यगतोऽपि भानुः शैत्यं निशायामथवा हिमांशुः ।

अनर्थमूर्धं शुषनावमानी मन्ये न मानं पिशिताशिनाथ ॥

- (b) शिक्षा तरिष्यत्युदके न पर्णे ध्वान्तं रवेः स्यन्त्यति वक्षिरिन्दोः ।  
जेता परोऽहं युधि जेज्यमाणस्तुल्यानि मन्यस्व पुलस्त्यनसः ॥

Explain the meaning of the verbal affix लिङ् in त्यजेत् Parse पुलस्त्यनसः and explain the suggestion in the same word.

Give the कट् and लिट् forms in the third person singular of the root of स्यन्त्यति in (b).

3. Either, Reproduce the description of the ominous natural signs observed by *Vibhīṣaṇa* foreboding the destruction of the *Rākṣasas*. 7

Or, Quote a verse from the *Bhāṭṭikāya*, similar in sense to the following:—

मतिमान् विनयप्रमाथिनः समुपेक्षेत समुच्चतिं द्विषः ।  
सुजयः खलु तादृगन्तरे विपदन्ता ह्यविनीतसम्पदः ॥

4. Translate into English either (a) or (b) :—

12

(a) अचिराच्च प्रशान्ते तस्मिन् मृगयाकलकले निवृष्टमूकजलधर-  
वृन्दानुकारिणि मथनावसानोपशान्तवारिणि सागर इव क्षितितामुपगते  
कानने मन्दीभूतभयोऽहं उपजातकुतूहलः पितुरुत्सङ्गादीषदिव निष्क्रम्य  
कोटरस्थ एव शिरोधरां प्रसार्य शैशवात् किमिदमिति समुपजातदिदक्षस्तामेव  
दिशं चक्षुः प्राहिणवम् ।

(b) अहो महासन्धेयं जरा याऽस्य प्रलयरविरश्मिदुर्निरीक्ष्ये रजनीकर-  
निकरपाण्डुरशिरोरुहे जटाभारे फेनपुञ्जधवळा गङ्गेव पशुपतेः क्षीराहुतिरिव  
शिखाकलापे विभावसोर्निपतन्ती न भीता । बहलाज्यपटलमक्लिनीकृताभ्रमस्य  
भगवतः प्रभावाद् भीतमिव रविकिरणजालमपि दूरतः परिहरति तपोवनम् ।

5. Explain only one of the following extracts, supplying the necessary words to complete the sentence :— 16

(a) सुरभिमासमारुतेनेव सततदक्षिणेन हिमगिरिकाननेवान्तः सरलेण  
दिवसेनेव मित्तानुवर्तिना बौद्धेनेव सन्वास्तिवादशूरेण सांख्यागमेनेव प्रधान-  
पुरुषोपेतेन जिनधर्मेणेव जीवानुकम्पिना विद्यासिजनेनाधिष्ठिता ।

(b) यस्यां चानिवृत्तिर्मणिदीपानां अन्तस्तरलता हाराणाम् अस्थितिः  
सङ्गीतमुरजध्वनीनां द्वन्द्ववियोगश्चक्रनाम्नां वर्णपरीक्षा कनकानां अस्थिरत्वं  
ध्वजानां मित्तद्वेषं कुमुदानां कोशगुप्तिरसीनाम् ।

Explain either the double meaning (श्लेष) in the underlined words of (a) of the above extracts; or the idea of exclusion suggested by the figure परिसंख्या in the underlined words of (b).

6. *Either*, Reproduce in your own words, in Sanskrit, the ideas contained in (A), turning the metaphors into similes. 15

*Or*, Fully elucidate the points of similitude in all the sentences of (B).

(A) तथा ह्रीयं संवर्द्धनवारिधारा तृष्णाविषवल्लीना व्याघगी-  
तिरिन्द्रियमृगाणां परामर्षधूमलेखा सञ्चरितचिक्षाणां विभ्रमशय्या मोहदीर्घ-  
निद्राणां निवासजीर्णबलभी-धनमदपिशाचिकानाम् ।

(B) जातुषाभरणानीव सोष्माणं न सहन्ते । कुष्ठवारणा इव  
महामानसम्भनिश्चलीकृता न गृह्णन्त्यपदेशं तृष्णाविषमूर्च्छिताः कनकम-  
यमिव सर्वं पश्यन्ति इषव इव पानवद्विस्तृतैक्ष्ण्याः परम्रेतिता विनाशयन्ति ।

What is the exact meaning of सोष्माणम् in (B)? Do you find the word used in the same sense in the *Sisupalabadha* or anywhere in your text-books?

7. Render the following, freely, into Sanskrit :—

29

Sweet was the sound when oft at evening's close  
Up yonder hill the village murmur rose ;  
There, as I passed with careless steps and slow,  
The mingling notes came softened from below ;  
The swain responsive as the milkmaid sung,  
The sober herd that lowed to meet their young,  
The noisy geese that gabbled o'er the pool,  
The playful children just let loose from school,  
The watchdog's voice that bayed the whispering wind  
And the loud laugh that spoke the vacant mind :  
These all in sweet confusion sought the shade,  
And filled each pause the nightingale had made.

### FIFTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Seven questions only are to be attempted, of which Question 1 is compulsory*

1. Render any four of the following into English, showing in brackets 15  
the original words after their equivalents in your translation :—

(a) तदस्म प्रियमभि पाथो अइयां

नरो यस्त देवयवो मदन्ति ।

उरुक्रमस्य स हि बन्धुरित्या

विष्णोः पदे परमे मध्व उत्स ॥

- (b) ता वा वास्तु॑न्यु॒ष्मसि॑ गम॒ज्यै  
यत्त॑ गा॒वो भूरि॑श्र॒ङ्गा अ॒यासः॑ ।  
अ॒ज्ञाह॑ तदु॒त्साय॑स्य वृ॒ष्णः  
पर॒मं प॒दम॑व भा॒ति भूरि॑ ॥
- (c) प्र स मि॒त्र म॒र्तो अस्तु॑ प्र॒यस्वा॒न्  
यस्त॑ आ॒दित्य॑ शि॒क्षति॑ व्र॒तेन॑ ।  
न ह॒न्यते॑ न जी॒यते॑ त्वो॒तो  
नैन॑म॒हो अ॒भ्योत्य॑न्ति॒तो न दू॒रात् ॥
- (d) अ॒नमी॒वास॑ इ॒ळया॑ म॒दन्तो॑  
मि॒तज्ञ॑वो ब॒रिम॑ज्ञा पृ॒थि॒व्याः ।  
आ॒दि॒त्यस्य॑ व्र॒तमु॑प॒क्षि॒यन्तो॑  
व॒यं मि॒त्रस्य॑ सु॒म॒तौ स्या॑म ॥
- (e) अव॑ द्रु॒ग्धानि॑ पि॒त्रा सृ॒जा नो  
ऽव॒ या व॒यं च॒क्र॒मा त॒नूभिः॑ ।  
अव॑ राज॒न्यशु॒तृपं॑ न ता॒यु  
सृ॒जा व॒त्सं न॑ दा॒भ्यो व॑सि॒ष्टम् ॥
- (f) न स॒ स्वो द॑क्षो ब॒रुण॑ ध्रु॒तिः सा  
सुरा॑ म॒न्युर्वि॑भी॒दको॑ अ॒धि॒तिः ।



अ॒स्ति॒ ज॒या॒या॒न्कनी॒यस॒ उ॒पा॒रे  
ख॒न्ध॒श्च॒ने॒द॒नू॒तस्य॒ प्र॒यो॒ता ॥

2. (a) Name and specify the characteristics of the metres of the above Rks. 14

(b) Re-write any two of the above Rks in the Pada form, showing the proper accents.

3. Write notes on :—

14

- (a) उ॒रु॒गा॒य । (b) कु॒च॒र । (c) शू॒ष ।  
(d) कृ॒ष्टि । (e) सु॒शे॒व । (f) स्व॒धा॒व॒न्त् ।  
(g) ऋ॒ष्व ।

4. (a) Paraphrase the following into classical Sanskrit :—

14

यं॒ सा॒ पृ॒च्छ॒न्ति॒ कु॒ह॒ से॒ति॒ घो॒रम्  
उ॒ते॒मा॒हु॒नै॒वो॒ अ॒स्ती॒त्ये॒नम् ।  
सो॒ अ॒र्यः॒ पु॒ष्टी॒र्वि॒ज॒ इ॒वा॒ मि॒ना॒ति  
अ॒द॒स्यै॒ ध॒त्त॒ स॒ ज॒ना॒स॒ इ॒न्द्रः॒ ॥

(b) Describe the occasion when the hymn containing the Rk was uttered, according to Śaṅkara.

(c) State the characteristics of Indra, and show what position he occupies in the Rgvedic pantheon.

5. Translate the following into intelligible English :—

14

वि॒ष्णोर्न॑ क॒मिति॑ षट्च॑ पञ्चद॒शं सू॒क्तं दे॒व॑र्ध॒तम॑सं वै॒ष्टुभं॑ वै॒ष्णवम् ।  
अ॒ज्ञानु॑क्रम॒णिका॑ । वि॒ष्णोः षट्॑ वै॒ष्णवं॑ हो॒ति । अ॒भि॒प्ल॒व॒ष॒ढे॒षू॒क्येषु॑  
तृ॒तीय॑स॒वने॒ सोम॑वृ॒द्धा॒व॒च्छा॒वाक॑स्य॒ सोमा॑ति॒ग्रं॒सना॑र्थमि॒दमा॑दि॒सूक्त॑द्वयं  
वि॒नियु॑क्तम् । सो॒मे॒ वर्ध॑मान॒ इति॑ खण्डे॒ सू॒क्षितम् । वि॒ष्णोर्न॑ क॒मिति॑  
सू॒क्ते॒ परो॑ मा॒ह्वये॑त्य॒च्छा॒वाक॑ इति । तथा तृ॒तीय॑स॒वने॒ सोमा॑ति॒रेक॑  
उ॒त्तरो॑त्तर॒सं॒स्थो॒पग॑न्त॒भ्या आ॑ति॒रा॒ज्ञात् । ततो॑ऽप्यति॒रि॒के॒ तद॑र्थमे॒व  
ज्ञा॒नु॒प॒ज॒न॒यि॒त॒व्यम् । तस्यै॑तदे॒व सू॒क्तं सोमा॑ति॒रेक॑ इति॒ खण्डे॑ सू॒क्षितम् ।  
मह्यं॑ इ॒न्द्रो नृ॒ष॒द्वि॒ष्णोर्न॑ क॒मिति॑ । अ॒ग्नि॒मा॒रु॒त॒श॒स्त्रे आ॒द्या वि॒नियु॑क्ता ।  
अ॒य यथे॑तमि॒ति खण्डे॑ सू॒त्रितम् । वि॒ष्णोर्न॑ कं वी॒र्या॑णि प्र॒वोचं॑ तन्मुं  
तन्मन्त्र॑जसो॒ भानु॑मन्विहीति ।

6. Annotate all the important words and names occurring in Question 14 14  
5, tracing as far as practicable the quotations contained in it.
7. Comment on the peculiar forms of Vedic grammar occurring in 14  
any four of the Rks cited in Question 1.
8. (a) What are the phonetic peculiarities of the Vedic dialects? 14  
(b) What is the position of the *upasarga* in the Vedic language?  
(c) State in what way the declension of neuter nouns in अन्  
in the Rgveda differs from classical Sanskrit.
9. Describe briefly the social life depicted in the Rgveda. 14
10. Give a brief account of the Akhyāna or Samvāda hymns in the 14  
Rgveda.

## SIXTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## GROUP A (Grammar)

*Attempt any FOUR questions from GROUP A*

1. Explain any three of the following sūtras with examples :— 15  
(a) सप्तमीपञ्चम्यौ कारकमध्ये ।  
(b) श्रुताणामनिरवसितानाम् ।  
(c) जातेष्व ।  
(d) एकविभक्ति चापूर्वनिपाते ।  
(i) Why does Bhaṭṭoji interpret कारकमध्ये as शक्तिद्वयमध्ये ? Is  
the word *kāraka* grammatically synonymous with *śakti*?  
(ii) Who are *aniravasitas*?  
(iii) What is the grammatical conception of जाति ?
2. Comment on the following with reference to the rules :— 15  
(a) एतत्सामर्थ्यादेव प्राचीनानां नित्यसमासत्वम् । सुप्सुपोतं  
तु न नित्यसमासः ।  
(b) समानाधिकरणे किम् ? महतः सेवा महत्सेवा ।  
(c) प्रकर्षविवक्षायां तु परत्वाद् कर्मसंज्ञा—पुष्पाणि स्पृहयति ।
3. (a) Why do you lay stress on विवक्षा in the exposition of the 15  
rule स्वतन्त्रः कर्ता ?  
(b) What is the implication of the word युक्त in सहयुक्तेप्रधाने ?  
Explain साहित्य and प्राधान्य in the course of elucidating the above rule.

4. (a) How do you reconcile the dictum **अनेकपदत्वं द्वन्द्वबहुव्रीहोरेव** 15 with the compound **घटानधिकरणम्** which, though apparently *tatpuruṣa*, consists of three members ( **घटस्य + न + अधिकरणम्** ) ?

(b) State the circumstances under which **एकोऽप्यर्थो वा बहुवचनवति** ।

5. (a) Show how the designation 'substratum of action' ( **क्रियाया आधारः** ) 15 may logically be attributed to a case other than **कर्तृकारक** ।

(b) **पृषोदरादीनि यथोपदिष्टम्** । How do you account for the validity of such forms as **पृषोदरम्** and the like? What do you know of those who are said to have made such **उपदेश** ?

### GROUP B (*Alaṃkāra*)

Attempt any FOUR questions from GROUP B

6. **गुणदोषानशास्त्रज्ञः कथं विभजते जनः ।** 10  
**किमन्धस्याधिकारोऽस्ति रूपभेदोपलब्धिषु ॥**

Explain the above, giving definitions of *guṇa* and *doṣa*. Name the figure of speech contained in it.

7. (a) Explain :— 10

**तदस्तत्तन्मैरनिशं सरस्वती श्रमादुपास्या खलु कीर्त्तिमीप्सुभिः ।**  
**कृशे कवित्वेऽपि जनाः कृतश्रमा विदग्धगोष्ठीषु विहर्तुमीक्षते ॥**

(b) Discuss whether **कवित्व** is an acquisition or an inborn faculty on the part of the poet.

8. (a) Explain and illustrate the following :— 10

**पताका । जनान्तिकम् । प्रहसनम् । आख्यायिका ।**

(b) In what respects does **रूपक** differ from **अपह्नुति** ?

9. Discuss the *alaṃkāras* in the following :— 10

(a) **पुरोपनीतं नृप ! रामणीयकं द्विजातिषोषेण यदेतदन्धसा ।**  
**तदद्य ते वन्यफलाशिनः परं परैति काश्चिं यशसा समं वपुः ॥**

(b) **अर्थं मन्दद्युतिर्भास्वानस्तं प्रति यियासति ।**  
**उदयः पतनायेति श्रीमतो बोधयस्करान् ॥**

(c) **पीतं पानमिदं त्वयाद्य दयिते ! मत्तं ममेदं मनः ।**  
**पक्षाळी तव क्रुद्धमेव रचिता रक्ता वयं मानिनि !**

10. Define and illustrate **अप्रस्तुतप्रशंसा**, **निदर्शना**, and **परिवृत्तिः** । 10

11. Write a short essay on the origin and development of the Sanskrit 10 drama.

## SANSKRIT—PASS

## FIRST PAPER

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(To look over answer-papers written in Uriya Character)—  
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SAS TRI.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English ONE *śloka* from Group A, two *ślokas* from 5+8+  
Group B, and THREE *ślokas* from Group C :— 12-25

## GROUP A

- (a) अनन्यगुर्वास्तव केन केवलः पुराणमूर्तेर्महिमावगम्यते ।  
मनुष्वजन्मापि सुरासुरान् गुणैर्भवान् भवच्छेदकरैः करोत्यथः ॥
- (b) तदेनमुल्लङ्घितशासनं विधेर्विधेहि कीनाशनिकेतनातिथिम् ।  
मुनतराचारविपत्तिमापदो निपातनीया हि सतामसाधवः ॥

## GROUP B

- (a) उत्तिष्ठमानस्तु परो नोपेक्ष्यः पथ्यमिच्छता ।  
समौ हि शिष्टैरात्मनातौ वस्यन्तावामयः स च ॥
- (b) पादाहतं यदुत्थाय मूर्धानमधिरोहति ।  
स्वस्थादेवापमानेऽपि देहिनस्तद्वरं रजः ॥
- (c) गुणानामायथातथ्यादर्थं विप्लावयन्ति ये ।  
अमात्यव्यञ्जना राज्ञां दूष्यास्ते शत्रुसंज्ञिताः ॥

## GROUP C

- (a) आयुष्यं प्राङ्मुखो भुङ्क्ते यशस्यं दक्षिणामुखः ।  
श्रियं प्रत्यङ्मुखो भुङ्क्ते कृतं भुङ्क्ते ह्युदङ्मुखः ॥
- (b) हृद्भाभिः पूयते विप्रः कण्ठगाभिस्तु भूमिपः ।  
वैश्योऽङ्घ्रिः प्राशिताभिस्तु शूद्रः स्पृष्टाभिरन्ततः ॥
- (c) क्षरन्ति सर्वा वैदिक्यो जुहोतियजतिक्रियाः ।  
अक्षरं दुष्करं ज्ञेयं ब्रह्म चैव प्रजापतिः ॥
- (d) इन्द्रियाणां तु सर्वेषां यद्येकं क्षरतीन्द्रियम् ।  
तेनास्य क्षरति प्रज्ञा ह्यतेः पादादिवोदकम् ॥
- (e) उत्पादकब्रह्मदाग्नोर्गरीयान् ब्रह्मदः पिता ।  
ब्रह्मजन्म हि विप्रस्य प्रेत्य चेह च शाश्वतम् ॥

2. (a) Change the voice of *either* half of A (a), and account for the 2+2  
absence of the singular number in सुरासुरान्. =4

(b) Expound the *samāsa* in the underlined expression in A (b). 2+1  
Derive विपक्तिम्. =3

(c) Account for the *ātmanepada* in उत्तिष्ठमानः in B (a). 2

(d) Comment on the formation of अमात्यव्यञ्जनाः in B (c). 2

(e) Parse प्रेत्य in C (e). 1

3. Explain *either* of the following *ślokas* in English or in simple 6+2  
Sanskrit, and indicate its context :— =8

- (a) अमानवं जातमजं कुले मनोः प्रभाविनं भाविनमन्तमात्मनः ।  
मुमोच जानन्नपि जानकीं न यः सदाभिमानैकधना हि मानिनः ॥
- (b) कृतः प्रजाक्षेमकृता प्रजासृजा सुपालनिक्षेपनिराकुलात्मना ।  
सदोपयोगेऽपि गुरुस्त्वमक्षयो निधिः श्रुतीनां धनसम्पदामिष ॥

4. Write explanatory notes on one of the following *ślokas* :—

8

- (a) वज्रगुणाः शक्तयस्त्रिभिः सिद्धयश्चोदयास्तयः ।  
ग्रन्थानधीत्य व्याकृतुमिति दुर्मेधसोऽप्यलम् ॥
- (b) सर्वकार्यशरीरेषु मुक्ताङ्गस्कन्धपद्मकम् ।  
सौगतानामिवात्मान्यो नास्ति मन्त्रो महीश्रुताम् ॥

5. (a) Write a clear note on EITHER *abhivādana* OR naming ceremony and names. 6

(b) Define the following terms :— 8

ब्राह्म्य, यज्ञियदेश, समयाध्युषित, and जितेन्द्रिय ।

6. Annotate any two of the following *ślokas* :—

- (a) स्वाध्यायेन व्रतैर्होमैस्त्वैविद्येनेज्यया सुतैः ।  
महायज्ञैश्च यज्ञैश्च ब्राह्मीयं क्रियते तनुः ॥
- (b) धर्मार्यावृच्यते श्रेयः कामार्थौ धर्म एव च ।  
अर्थ एवेह वा श्रेयस्त्रिवर्ग इति तु स्थितिः ॥
- (c) त एव हि त्रयो लोकास्त एव त्रय आश्रमाः ।  
त एव हि त्रयो वेदास्त एवोक्तास्त्रयोऽग्नयः ॥

7. Translate into Sanskrit :—

25

(a) When a danger is apprehended from robbers or thieves, it is considered as distress common to all; in such a case the danger must be repelled by all, not by one man alone, whoever he may be.

(b) Studying the Veda, practising austerities, the acquisition of true knowledge, the subjugation of the organs, abstention from doing injury and serving the Guru, are the best means of attaining supreme bliss.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Either, Describe in English or in Sanskrit the charming features of the *āśrama* of Kaśyapa as set forth by Kālidāsa in *Sakuntalā*. 15

Or, Bring out clearly in English or in Sanskrit the full implication of the attempted but interrupted celebration of the spring-festival in the royal garden by Madhukarikā and Parabhṛtikā.

Or, Contrast the characters of Anasūyā and Priyamvadā, as well as of Śāradvata and Śārāgarava, and explain the dramatic aspect of the contrast in each case.

The answer may be given either in English or in Sanskrit.)

2. Write a Sanskrit commentary, after the manner of Mallinātha, on one of the following, and explain fully in English another one of the verses :—

(a) (i) चित्ते निवेश्य परिकल्पित-सत्त्वयोगा

10

रूपोद्भयेन विधिना मनसा कृता नु ?

क्षीरक्षसृष्टिरपरा प्रतिभाति सा मे

धातुर्विभुत्वमनुचिन्त्य वपुश्च तस्याः ॥

(ii) स्वप्नो नु ? माया नु ? मतिभ्रमो नु ?

द्विष्टं नु तावत् फलमेव पुण्यम् ?

असंनिवृत्त्यै तदतीतमेते

मनोरथा नाम तदप्रपाताः ॥

(iii) अहन्यहन्यात्मन एव तावज्-

ज्ञातुं प्रमादस्खलितं न शक्यम् ।

प्रजासु कः केन पथा प्रयाती-

त्यशेषतो वेदितुमस्ति शक्तिः ?

(iv) कृतं न कर्णापितबन्धनं सखे

शिरीषमागण्डविलम्बि केशरम् ।

न वा शरच्चन्द्रमरोचिकोमलं

मृणालसूत्रं रचितं स्तनान्तरे ॥

(v) असंशयं क्षत्तपरिग्रहक्षमा

यदार्यमस्यामभिलाषि मे मनः ।

सतां हि सन्देहपदेषु वस्तुषु

प्रमाणमन्तः करणप्रवृत्तयः ॥

(b) Discuss grammatically two of the following :—

6 + 2  
= 8

(i) प्रतिभाति मे ।

(ii) पथा प्रयाति ।

(iii) असंशयम् ।

(iv) प्रमाणं...प्रवृत्तयः ।

Give one word for अहनि अहनि with the help of samāsa.

3. Sanskritize, and then annotate in English or in Sanskrit :—

12

भो दिव । एदस्स मिअआशीलस्स रण्णो वअस्सभावेण णिम्बिण्णो  
झि । अअं मिओ, अअं वराहो, अअं सहूलो ति मज्झण्णे वि  
गिह्वाविरलपाअवञ्छाआसु वणराईसु आहिण्डीअदि । पत्तसंकरकसाआइ  
कइआइ गिरिणइजलाइ पीअन्ति । अणिअदवेलं सुल्लमंसमूहो आहारो  
अणहीअदि । तुरगाणुआवणकण्डिदसन्निणो रत्तिमि वि मे णिकामं सहद्वं  
णत्थि । तदो महन्ते एव्व पच्चूले दासीएपुत्तेहिं सउणिलुइएहिं वणमाहण-  
कोठाहलेण परिबोधिवा झि । एत्तएण दाणिं वि पीडा ण निक्कमदि । तदो

गण्डस्स इवरि पिण्डओ संवुत्तो । द्विओ किं अण्डेसु ओहीणेसु तत्तहोदो  
मिआणुसारेण अस्समपव' पविहुस्स तावसकण्णभा मम अचण्णदाए दंसिदा ।

4. *Either*, Contrast Cāṇakya and Rākṣasa as politicians. 12

*Or*, Set forth in the form of history what you have read in *Mudrā-rākṣasa*.

*Or*, Contrast the characters of Malayaketu and Candragupta.

(The answer to Question 4 may be given *either* in Sanskrit *or* in English.)

5. Explain in *ṭīkā* form any *one* of the following :— 12

(a) क्रूरग्रहः स केतुश्चन्द्रमसम्पूर्णमण्डलमिदानीम् ।

अभिभवितुमिच्छति बलाद् — रक्षत्वेनं तु बुधयोगः ।

(b) कर्णेनेव विचाङ्गनं कपुरुषव्यापादिनी रक्षितो

हन्तुं शक्तिरिवाङ्गनं बलवती या चन्द्रगुप्तं मया ।

सा विष्णोरिव विष्णुगुप्तसहकस्यात्यन्तिकश्रेयसे

हृदिभ्येयमिवेत्य पर्वतनुपं तद्वध्यमेवावधीत् ।

(c) कार्योपक्षेपमादौ तनुमपि रचयंस्तस्य विस्तारमिच्छन्

बीजानां गर्भितानां फलमतिगहनं गूढमुद्देश्यं च ।

कुर्वन् बुद्ध्या विमर्शं प्रसूतमपि पुनः सहरन् कार्यजातं

कर्त्ता वा नाटकानामिममनुभवति क्लेशमस्मद्विधो वा ।

6. *Either*, Discuss the grammar in any *two* of the following :— 6

(a) चीयते कृषिः ।

(b) को लभतां विनाशम् ।

(c) स साचिष्यं ग्राहयितुं शक्यते ।

(d) आ पारेभ्यः ।

*Or*, Complete the verse :—

सेवां लाघवकारिणीं कृतघ्नियः स्थाने श्वदृप्तिं विदुः ॥

Translate into Sanskrit :—

17 + 8

— 25

(a) Where are now those glories of Mathurā? Where are gone those glories of Ayodhyā? Where are those heroes of a hundred fights? Ah! they are gone, gone for ever! Time brought them into existence; time kept them up; time destroyed them. Time alone rules supreme. Nothing of this world is permanent. Everything here is bound to perish. Nay, there are thinkers who even go further. Everything that is—ceases to be the very next moment. Change implies death. What is there that is not constantly changing? Time itself is changeable.

(b) Unskilful he to fawn, or seek for power,  
By doctrines fashioned to the varying hour;  
Far other aims his heart had learnt to prize,  
More bent to raise the wretched, than to rise.



## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## GROUP A

1. Translate into English two of the following extracts :—

30

(a). आसीद्देवतीतटे विदिशा नाम काचिप्पुरी मण्डनं भूमण्डलस्य पुरुहूतपुरस्पर्धिविभवा । तस्यां निजभुजवीर्यविजितसकलारातिमण्डल आखण्डल इव श्रीमानाजा शूद्रकोऽभवत् । तस्यानन्यलभ्यानां सुखानां पारदृश्वनो यूनोऽपि विषयापराङ्मुखं मनो बभूव । अथैकदा बाह्याङ्गन-स्थानवर्तिनं तमुपसृत्य प्रतीहारी विनयावनम्रा व्यजिज्ञपत् । देव काचिच्छण्डालकन्यकाऽऽश्रयावहं शुक्रमादाय देवदर्शनलालसा तमुपायनीकृतुं देवपादभूलमागता ।

(b) तथेत्युक्त्वा नलो दमयन्त्या निवेशं जगाम । तत्र वपुषा देदीप्यमानां सुकुमाराङ्गीं तनुमध्यां वदनकान्तया चन्द्रमसमपि प्रत्यादिशन्तीं सखीगणसमावृतां तां दृष्ट्वा तस्य कामो ववृधे । सत्यनिष्ठस्तु कथं कथमपि तमधारयत् । नलप्रतिमरूपं दृष्ट्वा सख्यो विस्मिताः किञ्चिदपि व्याहृत-मक्षमा अभवन् । दमयन्ती तु स्मितपूर्वं नलमभ्यभाषत । सर्वानवद्याह्नवीर, कस्त्वं कुतः समागतः कथं चाक्षालक्षितस्ते प्रवेशः । इदं वेदमसुरक्षितं वर्तते राजा चोप्रशासन इति ।

(c) एकदा जीमूतवाहनो मिलावसुना सह समुद्रवेलां द्रष्टुं गतस्तमुवाच । शय्या शादूलं, आसनं शुचिशिला, सन्न द्रुमाणामधः, शीतं निर्झरवारि पानं, कन्दा अशनं, मृगाः सहाया इत्येवमप्रार्थितलभ्य-सर्वविभवे वनेऽयमेवैको दोषो यदुष्पापार्थिजने तस्मिन् परार्थघटनाबन्धैः स्थीयते इति । ततो यावज्जलप्रसरगमार्गादपक्रम्य गिरिसानुसमीपमार्गेण पर्यक्रामत्तावज्जीमूतवाहनो नागानामस्थिसंघातात् शिखराकारानपश्यत् । तानन्तरेण पृष्ठो मिलावसुस्त्वाच ।

2. (a) Form sandhi in any three of the following :—

3

दिक् + नागः ; परिव्राट् + शेते ; तेजः + विन् ; तव + ऋद्धिः ;  
अमू + अर्भकौ ।

(b) Decline any three of the following :—

3

अप् in प्रथमा ; पुमस् in द्वितीया (plural) ; त्रि (feminine) in षष्ठी (plural) ; सुगप् in सप्तमी (plural) ; अस्थि in सप्तमी (singular).

(c) Conjugate any three of the following :—

6

सु in लट् ; तन् in लिट् ; भिद् in लोट् ; दा in कृट् ;  
गम् in कृष् ।

(d) Frame sentences to illustrate the following :—

4

(i) कर्मप्रवचनीय योगे द्वितीया । (ii) हेतौ तृतीया ।

(iii) अनादरे षष्ठी । (iv) निर्धारणे सप्तमी ।

(e) Dissolve the *samāsas* in any four of the following, naming and explaining the nature of each :—

प्रत्यहम् ; गोहितम् ; कापुरुषः ; देवपूजकः ; केशाकेशि ;  
पाणिपादम् ।

3. Correct or justify any four of the following, giving your reasons for corrections :—

(a) ग्रामे अधिवसन् स मां द्रुहति ।

(b) मे प्रियसखा राम इदानीमस्यैव वर्तते ।

(c) यो निश्चेष्टो गृहे अध्यास्ते स किम् सुखं सन्तिष्ठति ।

(d) रामः प्राते जाग्रति, उत्थाय किञ्चिद् भुञ्जते च ।

(e) गंगायां प्रातस्तनानं कुर्वाण विप्रो स्रोतेन नेयमानां मक्षिकां दृष्ट्वा

कृपया तमुद्धरत् ।

(f) अम्बे, देवदर्शनार्थं केन पथेन गमिष्ये ।

### GROUP B

(Attempt any THREE questions)

1. Write notes on any two of the following :—*Aśvaghoṣa*, *Kālidāsa*, *10*  
and *Bhāvabhūti*.

2. What do you know of any five of the following works :—*Mṛccha- 10*  
*kaṭīka*, *Pañcatantra*, *Mitālśara*, *Rājatarāṅgiṇī*, *Kathāsaritsāgara*, *Sāhitya-*  
*darpaṇa*, *Gītāgovinda*?

3. Give an account of the lyrical poetry in Sanskrit. 10

4. Write a note on 'the art of writing and the transmission of Indian 10  
literature'.

5. Determine 'the Age and History of the *Mahābhārata*'. 10

## PĀLI—HONOURS

## FIRST PAPER

*Paper-Setters—  
(Pass and Honours)*

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 „ BENIMADHAB BARUA, M.A., D.LIT.  
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*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any four of the following stanzas, adding 16  
short explanatory notes where necessary :—

(a) Si kho paṭhavim vi-*essati* yaṃ na okaṃ ca sadevakam, sekho dham-  
mapadam sudesitam kusalo puppham iva pa-*ressati*.

(b) Aciram vat' ayaṃ kāyo paṭhavim adhisessati obuddho apeta-  
vināṇo nirattham va kalinṇam.

(c) Vanaṃ chindatha, mā rukkham, vanaṃ jāyati bhayaṃ,  
chetvā vanaṃ vanaṃ haṃ ca mibbhaṃ hotha bhikkhavo.

(d) Anekāṭṭisaṃsāram saṃhivissam anubhisam gahakārakam  
gavesanto dukkhā jāti punappunam, gahakāra kaḥ diṭṭho' si, puna geham  
na kāhasi.

(e) Yo uppatitam vineti kodham visatam sappavisam va ośadhehi,  
so bhikkhu jāhāti oraparāṃ urago jiggam iva tarāṃ purānam.

(f) Mamāyite passatha phandaṇāne macche' va appodake khīṇasote,  
ete' pi diṣvā amsino careyya bhavesu āsattim akubbamaṇo.

2. (a) Show how the stanza 1 (b) is quite out of place in the *Cūṭavagga*. 4

(b) Discuss the importance of the stanza 1 (a). 4

(c) Indicate the bearing of the stanza 1 (d) on the Jātaka-cult of Pāli 4  
Buddhism.

3. Explain any two of the following stanzas in Pāli :— 10

(a) Alaṅkato' pi samam careyya santo danto niyato brahmacāri.  
sabbesu bhūtesu nidhāya dandam, so brāhmaṇo, so samapo sa  
bhikkhu.

(b) Tasiṇāya burakkhato paṇā parisappanti saso' va bādhito,  
saṃhoṇaṇa-sūgasattakā dukkham upenti punappunam cirāya.

(c) Ekam hi saccam, na dutiyam atthi, yasmiṃ paṇāno vivade paṇānam  
nānā te saccāni eyaṃ thunanti, taṃā na ekam samapā vadanti.

4. Write explanatory and critical notes on any three of the following :—  
 (a) *Manopubbāṅgamā dhammā, manoseṭṭhā manomayā.*  
 (b) *Appamādo amatapadam.*  
 (c) *Eso maggo visuddhiyā.*  
 (d) *Nāhaṃ taṃ brāhmaṇaṃ brāmi yonijaṃ mattisambhavaṃ.*  
 (e) *Khaggavisāṇakappo.*
5. Either, (a) Comment on the language and metres of the *suttas* in the *Suttanipāṭa*. 5  
 (b) Wherein lie the excellence and value of the *gathās* of the *Dhammapadam*? 5  
 Or, (c) "The high antiquity of the *Suttanipāṭa* is proved not only by the subject-matter, but also by the language and style." Refute or justify this remark. 10
6. Either, (a) What is the main trend of thought which runs through the teaching of the *Dhammapadam*? 10  
 Or, (b) "The *Suttanipāṭa* reminds us of the Buddhist community in its primitive stages, and not in its full-grown organized form with its rich monastic institutions." Explain.
7. Translate the following stanzas into idiomatic English :— 80  
 Na hi so upakkāmo atthi yena jātā na miyyare !  
 jaram pi pavā maraṇaṃ, evaṃ dhammā hi pāpino !  
 Phalānaṃ iva pakkānaṃ niccaṃ patanato bhayaṃ !  
 evaṃ jātānaṃ macceṇaṃ niccaṃ maraṇato bhayaṃ !  
 Yathā hi kumbhukā assa katā mattika-bhājanā !  
 sabhā bhedana-pariyantā, evaṃ macceṇa jīvitā !  
 Dabharā ca mahantā ca ye balā ye ca paṇḍitā !  
 sabbe maccupassaṃ yaṇṭi, sabbe maccuparāyaṇā !  
 Tesaṃ maccuparetānaṃ gacchataṃ paralokato !  
 na pi tāyate puttā, nāti vā pana nātaka !

## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following extracts, adding explanatory notes where necessary :— 18  
 (a) Atha kho Nāgasenassa dāraṇassa pitā Nāgasenaṃ dāraṇaṃ etad avoca : Imasmim kho tāta Nāgasena brāhmaṇakule sikkhāni sikkheyyasīti.—Katamāni tāta imasmim brāhmaṇakule sikkhāni nāma ti.—Tayo kho tāta Nāgasena vedā sikkhāni nāma, avasesāni sippāni sippaṃ nāma ti.—Tena hi tāta sikkhissasīti.—Atha kho Soguttaro brāhmaṇo ācariya-brāhmaṇassa ācariyabhāgaṃ sahasaṃ datvā antopāsāde ekasmim gabbhe ekato matṭakam pūṇāpetvā ācariyabrāhmaṇaṃ etad avoca : Sajjhāyāpehi kho tvaṃ brāhmaṇa imaṃ dāraṇaṃ mantāni ti.  
 (b) Upasampanno ca pan' āyasmā Nāgaseno tassa rattiya accayena pubbanhasamayam nivāseivā pattacivaram ādāya upajjhāyena saddhim' gāmaṃ piṇḍāya parisanto evarūpaṃ parivitakkam uppādesi : tuccho vata

me upajjhāyo, bālo vata me upajjhāyo, t̥hapetvā avasesaṃ buddhavaśanaṃ paṭhamañ mañ Abbidhamme vivesi ti. Atha kho āyasmā Rohaṇo āyasmato Nāgasenaśa cetasa cetoparivitakkam aññāya āyasmantaṃ Nāgasenaṃ etad avoca : Ananucchaviyaṃ kho Nāgasena parivitakkam vitakkesi, na kho pan' etaṃ Nāgasena tavānucchaviyaṃ ti.

(c) Ekamantaṃ nisinnaṃ kho āyasmantaṃ Nāgasenaṃ āyasmā Assagutto etad avoca : Gaccha tvaṃ Nāgasena Pāṭaliputtam, Pāṭaliput tanagare Asokārāme āyasaṃ Dhammarakkhito paṭivasati, tassa santike buddhavaśanaṃ pariāpūṇāhi ti.—Kīva dūre bhante ito Pāṭaliputtanagaraṃ ti.—Yojanasatāni kho Nāgasena ti.—Dūro kho bhante maggo, antarāmagge bhikkhā dullabhā, kathāhaṃ gamissāmi ti.—Gaccha tvaṃ Nāgasena, antarāmagge piṇḍapātāṃ labhissasi, sālīnaṃ odanaṃ vicitakāṣakaṃ anekasūpanaṃ anekabyañjanan ti.—Evaṃ bhante ti kho āyasmā Nāgaseno āyasmantaṃ Assaguttaṃ abhivādetvā padakkhiṇaṃ katvā pattacivaram ādāya yena Pāṭaliputtam tena cārikaṃ pakkāmi.

(d) Idam vattvā Milindo rājā utthāy āsanā therāṃ Nāgasenaṃ spucchitvā assaṃ abhirūhitvā Nāgaseno Nāgaseno ti sajjhāyaṃ karonto pakkāmi. Atha kho Devamantiyo āyasmantaṃ Nāgasenaṃ etad avoca : Rājā bhante Milindo evam āha : sve antepure sallāpo bhavissati ti.—Suṭṭhū ti thero abbanumodi. Atha kho tassa rattiyā accayena Devamantiyo ca Anantaḥkayo ca Mankuro ca Sabbadinno ca yena Milindo rājā ten, upasaṅkamimsu upasaṅkamitvā rājānaṃ Milindaṃ etad avocuṃ : Āgacchati mahārāja bhaddanto Nāgaseno ti.—Āma, āgacchati ti.

2. (a) What is the difference between *acariya* and *upajjhāya*? 2

(b) What is meant by *buddhavaśana*? What light is thrown by extracts (b) and (c) on the growth of the Buddhist canonical literature? 6

(c) What evidence is there in the *Milindapañha*, besides that in extract (c), about the existence of an old route from the Himavanta to Pāṭaliputta? 4

(d) Name and expound the *samāsa* in one of the following :— 2  
*antepāāda* in 1 (a), *antarāmagge* in 1 (c), and *antepure* in 1 (d) above.

(e) Disjoin the *sandhi* in *kathāhaṃ* in 1 (c) above. 1

3. (a) Comment on the phraseology of any three of the following expressions, adding etymological notes :—(i) *t̥hapetvā avasesaṃ buddhavaśanaṃ*, (ii) *cārikaṃ pakkāmi*, (iii) *therā bhikkhū Sāgalanagaraṃ kāsāvapajjotaṃ isivātapaṇvātāṃ akāmsu*, (iv) *rañño adhikāraṃ kareyya*, and (v) *dvārattā gacchanti*. 6

(b) Give the derivations of the italicized words :—(i) *pū'āṃ sadiyati* 3  
(ii) *sakiccayam katvā*, (iii) *ananucchaviyaṃ parivitakkam vitakkesi*.

(c) Give the meanings of any three of the following terms as they have been used in the *Mūlinda* :—*ālīmpana*, *vedagū māla*, *pavana*, and *dhammakaraka*.

4. Give Nāgasena's reply to one of the following questions, adding your own observations :— 8

(a) *Katham bhante nirodho nibbānaṃ ti?*

(b) *Yam pan-etaṃ brusi "saṃsāro" ti, katamo so saṃsāro ti?*

5. Amplify, in your own Pāli, ONE of the following statements :—

(a) "Attāhi gihī pi dhammacārisamacāri."

(b) "Viñāṇanalekkhaṇaṃ viññāṇat, pañāṇanalekkhaṇaṃ paññā."

6. Either. "The whole work (i.e., the *Dhammapada-aṭṭhakathā* constitutes a species of Buddhist *Acta Sanctorum*, enforcing, by multitudinous concrete examples, the theory of Karma laid down in the fundamental text with which the *Dhammapada* opens." Illustrate the remark by a résumé of any suitable story from your text.

Or, "Like the Jātaka book, which it so much resembles, the work (i.e., the *Dhammapada-aṭṭhakathā*) is a perfect mine of curious information on ancient India." Illustrate the statement in some detail.

7. Translate into idiomatic English :—

30

Sā sakalagehaṃ vicinitvā aḍḍhamāssakamattam pi adisvā "ayya, amhākaṃ nivattavattahaṃ ṭhapetvā aññaṃ kiṃ ci na passāmi, sakalagehaṃ tucchā" ti āha. Sattaratanagabbhesu dvāraṃ vivarāpetvā na kiṃ ci addasaṃsu, seṭṭhiṃ ca bhariyaṃ ca ṭhapetvā aññe dāsakammakarāpi na paññāyimsu. Puna Mahāsatto bhariyaṃ āmantetvā "bhadde, na sakkā dānaṃ pacchinditum, sakalanivesanaṃ vicinitvā kiṃ ci upadhārehi" ti āha. Tasmīṃ khane eko tiṇahārako asitaṃ c'eva kājaṃ ca tiṇabandhanarajjuṃ ca dvārentare chaḍḍetvā palāyi. Seṭṭhibhariyā naṃ disvā "sāmi imaṃ ṭhapetvā aññaṃ na passāmi" ti āharitvā adāsi. Mahāsatto "bhadde, mayā ettakaṃ kālaṃ tiṇaṃ nāma na lāyitapubbaṃ, ajja pana tiṇaṃ lāyitvā āharitvā vikkipitvā yathānucchavikaṃ danaṃ daṣṣāmi" ti dānupaccheda-bhayena asitaṃ c'eva kājaṃ ca rajjuṃ ca gaḥetvā nagarā nikkhamma tiṇavattahaṃ gantvā tiṇaṃ lāyitvā "eko amhākaṃ bhaviṣṣati, ekena dānaṃ daṣṣāmi" ti dve tiṇakalāpe bandhitvā kā'e laggetvā ādāsa gantvā nagaradvāre vikipitvā māsaḥ gaḥetvā ekaṃ koṭṭhāsaṃ yācukānaṃ adāsi.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

#### GROUP A

1. (a) Construct short Sanskrit sentences with any five of the following words :— 5

अन्तरा, उत, तर्हि, सिः, हित्वा, पञ्चविंश and इच्छन् ।

(i) Correct any three of the following sentences :— 3

(i) एषस्तत्र गमिष्यति ।

(ii) मां वस्त्रं देहि ।

(iii) ते किं नाम ।

(iv) व्याघ्रा मृगान् हन्ति ।

(v) राजा शत्रून् विजयति ।

(c) Illustrate any two of the following :— 3

अपवर्गे तृतीया, निमित्ते सप्तमी and कर्तरि षष्ठी ।

(d) Change the voice of any two of the following sentences :— 4

(i) बाळका ग्रामं गच्छन्ति ।

(ii) तेनैतत् कृतम् ।

(iii) पितरौ बन्धे ।

2. (a) Give the comparatives and superlatives of *oppa* and *pasattha*. 3  
 (b) Decline any two of the following :—*amu* (ablative), *pumā* 2  
 (locative), and *rājā* (instrumental).  
 (c) Conjugate *brū* in the aorist, *dā* in the optative or *su* in the future. 3  
 (d) Substitute single words for any two of the following :—(i) *attano* 2  
*puttā* *icchatti*, (ii) *vasiṭṭhassa* *putto*, (iii) *makasānaṃ* *abbdvo*.  
 (e) Give the desiderative of *dā* or *bhuj* and the causative of *thā* 2  
 or *han*.  
 (f) Account for the case-ending in any two of the italicized words :— 3  
 (i) *upajjhāyā* *antaradhāyati* *sisso*.  
 (ii) *bhutteru* *āgato*.  
 (iii) *māsā* *adhite*.

## GROUP B

Answer THREE questions, including Question 1.

1. What is known about the culture and civilisation of the primitive 20  
 Indo-Germanic people as disclosed by a comparison of languages?  
 2. Define *dialect* and show how dialects point to a common mother 10  
 language.  
 3. Write a short note on the affinity of Sanskrit with Avestan. 10  
 4. What are the phonetic peculiarities of Pāli? Illustrate the 10  
 inflectional resemblances between Pāli and Sanskrit.  
 5. 'In conjugation too, dialects of the inscriptions agree materially 10  
 with the Pāli.' Illustrate.

## GROUP C

Translate into Pāli :—

Now after the lapse of two or three days Citta, the son of the elephant 30  
 trainer, and Poṭṭhapāda, the mendicant, came to the place where the  
 Exalted One was staying. And on their arrival Citta bowed low to the  
 Exalted One and took his seat on one side. And Poṭṭhapāda, the mendicant,  
 exchanged with the Exalted One the greetings and compliments of courtesy  
 and friendship, and took his seat on one side, and when he was so seated  
 he told the Exalted One how the mendicants had jeered at him, and how he  
 had replied.

## FOURTH PAPER

Candidates are required to give their answers in their  
 own words as far as practicable

The figures in the margin indicate full marks

## A. TEXT

1. Translate into English any three of the following verses, adding 18  
 notes on the italicized words :—

- (a) Sabbathā maṇḍayitvā taṃ attharāpesi tattha so  
 bhikkhūnaṃ gāṇāveva anagghattharapāni ca.  
*Nissāya* dakkhiṇaṃ bhāgaṃ uttarāmukhaṃ uttamaṃ.  
*therāsaṇaṃ* supaṇṇattaṃ āsi tattha mahārāhaṃ.  
*Tasmiṃ* maṇḍapamaññaṃ puratthāmukhaṃ uttamaṃ  
*dhammāsaṇaṃ* supaṇṇattaṃ ahoṃ sugatārāhaṃ.

- (b) *Sumanassa* kumārassa devī tamnāmikā tato gabbhini nikkhamitvānā paṇḍarāto buhi caṇḍalagāmaṃ agamā, tathā nigrodhadavatā tam ānantiya nāmena māpetvā gharakaṃ adā. Tadahe va varaṃ putiṃ vi āvitvā sutassa sā Nigrodho ti akā nāmaṃ devatānuggahānugā.
- (c) “*Vibhajjavādī* sambuddho hoti bhante?” ti, āha so thero : “āma” ti, tam sutvā rājā tuṭṭhamano tadā “sammho visodhito yasmiṃ tasmā sammho uposathaṃ karotu bhante” iccevaṃ vatvā therassa bhūpati *sanghassa rakkhaṃ datvā* nagaraṃ pāvīsi subhaṃ. Sammho sammaggo hutvāna tadākāsi uposathaṃ.
- (d) *Saraṇesu ca silesu* sṭṭhamsu bahavo janā, sṭṭhiyā tu saba-sānaṃ *dhammābhisamayo* abhū. Adḍhuddhāni sahasāni pabbajjūni kuladārakā, pabbajimsa diyaḍḍhaṃ tu saha-saṃ kuladhitaro. Tato pabhūti saṃ āte rājagehe kuṃ ārake tattha karimsu rājāno Soputtarasanaṃ make.

2. *Either*, What data are available in the *Mahāvamsa* for the chronology of Indian kings from Bimbisāra to Aśoka ? 10

*Or*, Give an account of the schismatic activities of the Vajjiputtaka bhikkhus and show how they contributed to the growth of what is known as ‘Ācariyavāda.’

3. Discuss the location of any *two* of the following countries :— 6  
*Mahisamāṇḍala*, *Vanavāsī*, *Aparantaka*, *Yonavisaya*, and *Suvannabhūmi*.
4. Explain fully any *three* of the following words :—*ārāma*, *cetiya*, *thūpa*, *pabbajjā*, *upasampadā*, *pavāraṇā*, and *uposatha*. 6

## B. SANSKRIT GRAMMAR

5. (a) Explain and illustrate any *two* of the following grammatical phenomena :—*guṇa*, *vrddhi*, *samprasāraṇa*. 6

(b) Correct, giving reasons, or justify any *four* of the following  $1\frac{1}{2} \times 4$  forms :— =6

दूषणम्, अर्केण, प्रवेन, अचणम्, दर्शनम्, and अक्षन्वत् ।

(c) Write out the masculine singular forms of *either* सन्नात् or राजन् 3  
in all the cases.

(d) Give the comparative and superlative degrees of any *six* of the following :— 6

चनिम्, बलवत्, प्राच्, दोग्ध, बहु, अल्प, दीर्घ, and म्रिय ।

6. Translate into Sanskrit any *three* of the following sentences :— 9

- (a) Contentment is the key of comfort.  
(b) To the wise a hint is sufficient.  
(c) By moderate eating we escape much sickness.  
(d) Let us hear the conclusion of the whole matter.  
(e) Fear God and keep His commandments.



## C. UNSEEN

30

7. Translate into idiomatic English :—

Sakuṇo Mayhako nāma girisānudaricarō  
 pakkam pippalam āruyha mayha mayhan ti kandati.  
 Tass' eva vilapantassa dijasamghā samāgatā,  
 bhutvāna pippalim yanti, vilapi tv-eva so diḷo.  
 Evam eva idh' ekacco samgharitvā bahurūp dhanam  
 n' ev' attano na ātīnam yathodhim paṭṭapajjati.  
 Na so accchādanam bhattam na mālam na vilepanam  
 anubhoti sakiṃ kiñci na samghāhāti nātaka.  
 Tass' eva vilapantassa mayha mayhan ti rakkhato  
 rājāno atha vā corā dāyādā yeva appi vā  
 dhanam ādāya gacchanti, vilapi tv-eva so naro.  
 Dhīro bhoge adhigamāna samghāhāti ca nātaka,  
 tena s' kittim pappoti pecca sagge ca modati.

## FIFTH PAPER

*Candidates are required to give their answers in their  
 own words as far as practicable*

*The figures in the margin indicate full marks*

## A. TEXT

1. (a) Translate into English :—

8

Aniccā vata saṃkhārā uppāda-vaya-dhammino,  
 appajjitvā nirujjanti, tesaṃ vupassāno sukho ti.  
 Nāhu assāsa-passāso tṭhita-ittassa tā' vīno  
 Anejo santim ārabhha yaṃ kalam akari muni  
 Asallīnena cittaena vedanam ajjhavāsaya :  
 Pajjotass' eva nibbānam vimokkho cetuso ahū ti.

Show that the above stanzas contain the essential principles of  
 Buddhism. 4

(b) Translate into English, adding grammatical notes on the  
 talicised words :— 10

Apariyosita-saṃkappo vicikicchī kathamkathī,  
 Vicari dīgham addhānam anvesanto Tathāgataṃ  
 I' assu maññāmi samāne pavivitta-vihārīno  
 Sambuddho iti maññamāno gacchāmi te upāsatum.  
 Taphāsullassa hantāram Buddhā app' tīpuggalam,  
 Aham vande mahāviraṃ vandāmi ādiccabandhunam.  
 Yaṃ karomase Brahmaṇo samānam devani n' ārisa  
 Tad ajiya tuyham kassāma bandha sāmānam karoma te.

2. Either, What is the drift of the questions put by Sakka Indira to  
 Buddha in the *Sakka-pañha Suttanta* ? 5

Or, Discuss the importance of the places through which Buddha  
 passed in his last journey and identify them as far as possible. 5

3. (a) What is in your opinion the probable age of compilation of the  
*Mahāparinibbāna-Suttanta* ? 8

(b) Is the *Mahāparinibbāna-Sutta* a *Buddhavacana* ? If so, how  
 do you account for the inclusion of the last chapter which deals with the  
 events after the death of Buddha ? 8

4. (a) Enumerate from your text the six causes of 'welfare of the  
 Vajjian clan.' 3



(b) Either, What are the four places of pilgrimage recommended for the Buddhist lay-devotees ? 2

Or, Explain fully :— 5

Silam samādhi paññā ca vimutti ca anuttarā  
Anubuddhā ime dhammā Gotamena yasassinā.

### B. SANSKRIT GRAMMAR

5. (a) Give four instances of denominative verbs in Sanskrit. 4

(b) Frame sentences with any three of the following words, showing how they influence the tense of a verb :— 6

**स, मा, यावत्, पुरा, कदा, कर्हि ।**

(c) Name any FOUR *Kṛtpratyayas* and give illustration of their use. 4

6. Account for the case-endings of any four of the words underlined in the following sentence :— 4

श्रममन्तरेण विद्या न भवति ।

वनं यावदनुसरति ।

अलं विवादेन ।

कर्णेन वधिरः ।

दुःखेन रोदिति ।

स्नानाय नदीं याति ।

स्वाहा अग्नये ।

फलेभ्यो याति ।

7. Conjugate either **विद्** in **लोट्** or **आप्** in **लङ्** and either **अश्** in **कट्** or **गम्** in **किट्** । 6

8. Decline any two of the following stems in all the cases and numbers :— 6

**धावत्, आत्मन्, दिश्, वारि ।**

### C. UNSEEN

9. Translate into English any two of the following passages :— 30

(a) Iti pi so Bhagavā arahaṃ sammā-sambuddho vijjācaraṇa-saṃpanno sugato lokavidū anuttaro purisadamma-sārathi satthā deva-manussānaṃ buddho bhagavā. So imaṃ lokam sadevakam samārakam sahrāmakaṃ sassamaṇa-brāhmaṇiṃ paṇaṃ sadevaṃ-nuasaṃ sayam abhiññā sacchikatvā pavedetī. So dhammaṃ deseti ādikalyāṇaṃ majjhe kalyāṇaṃ pariyosāna-kalyāṇaṃ.

(b) Evaṃ vutte rājā Māgadho Ajātasattu Vedehiputto Bhagavantam etad avoca : "Abhikkantaṃ bhante, abhikkantaṃ bhante Seyyathā pi bhante nikkujjitaṃ vā ukkujjeya paṭicchannaṃ vā vivareyya mūlhasa va maggaṃ āikkheyya andhakāre vā tela-pajjotaṃ dhāreyya : cakkhumanto rūpāni dakkhintīti, evam eva Bhagavatā aneka-pariyāyena dhammo pakāsito.

(c) Kathaṃ ca Poṭṭhapāda bhikkhu indriyesu guttadvāro hoti ? Idha Poṭṭhapāda bhikkhu cakkhunā rūpaṃ diśvā na nimittaggāhī hoti nānuvyañjanaggāhī. Yatvādhikaraṇaṃ eṇaṃ cakkhundriyaṃ asaṃvutaṃ viharantaṃ abhiññādomanassaṃ pāpakā akusala dhammā anvāsavaṃvutaṃ tassa saṃvarāya paṭipajjati, rakkhati cakkhundriyaṃ, cakkhundriye saṃvaraṃ āpajjati.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The questions are of equal value*

## GROUP A

*Attempt FOUR questions only*

1. Give an account of the Śākya, describing their political and social institutions. What was the cause of their extermination?
2. What do you know of the social grades existing in Northern India in the sixth and seventh centuries B.C.?
3. Describe the economic condition of India about the time of Buddha.
4. Enumerate the Mendicant Orders, specify their characteristics, and explain their influence on Buddhism.
5. Indicate briefly the nature and age of the various constituents of the Pāli literature other than the Jātakas.
6. Describe Asoka as a man, ruler, and missionary.
7. Give the traditional account of the Buddhist Councils. Which of them do you consider historical, and to what extent?

## GROUP B

*Attempt FOUR questions only*

8. 'Language is only partly rational and logical; there is in all languages an element of irrationality.' Explain.
9. Explain Grimm's Law and Verner's Law, giving illustrations of each.
10. Briefly indicate what groups of languages are included in (a) the Indo-Germanic family, and (b) the Indo-Iranian family.
11. Describe the original home, age, and general structure of the parent Aryan language.
12. Show how far Pāli, Vedic Sanskrit, and Classical Sanskrit are interrelated.
13. Describe the nature and origin of Prakṛite, and discuss their relation with Apabhraṃśa.

## PĀLI—PASS

## FIRST PAPER

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DR. NALINAKSHA DATTA, M.A., PH.D., D.LIT.  
MR. MUKUNDABIHARI MALLIK, M.A., B.L., M.L.C.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any four of the following stanzas, adding short explanatory notes where necessary :— 20
- (a) Phandanam capalam cittaṃ durakkham dunnivārayaṃ|  
ujum karoti medhāvi usukāro va tejanam||  
Vārijo va thale khitto ekamokata ubbhato|  
pariphaṇḍati' dāṃ cittaṃ māradheyyaṃ pahāṭave||

- (5) *Aññā hi lābhūpanisā aññā nibbāṇa-gāmini|  
evam etaṃ abhiññāya bhikkhu Buddha-sa sāvako||  
sakkāraṃ nābhinaṇdeyya vivekaṃ anubrūhaye||*
- (6) *Yo ve uppatitaṃ kodhaṃ rathaṃ bhantaṃ va dhāraye|  
taṃ ahaṃ sārathinṃ brūmi, rasamaggāho itaro jaṇo||*
- (7) *Na jaṭāhi, na gottena, na jaccā hoti brāhmaṇo|  
yamhi saccaṃ ca dhammo ca, so suci, so ca brāhmaṇo||  
Kin te jaṭāhi dummeha kin te ajina-āṭiyā|  
abbhantaran te gahanam, bāhiraṃ parimajjasi||*
- (8) *Saṃsaṃsagga-ātassa bhavati sneho, snehanvayaṃ dukkham idaṃ  
pahoti|  
ādinavaṃ snehaṃ pekkhamāno eko care khagga-visāva-kappo||*
- (9) *Sakaṃ sakaṃ diṭṭhi-paribhasānā viṃṣayha nānā kusalā  
vadanti|  
“yo evaṃ ānāti sa vedi dhammaṃ, idaṃ paṭikkosaṃ  
akevaṃ so”||  
evam pi viṃṣayha vivādiyanti, bālo paro akusalo 'ti cāhu||*
2. Comment on any four of the following :—(a) *cakkam va vaho* 12  
*padam*; (b) *gopo va gāvo gaṇayaṃ paresaṃ*; (c) *assaddho akataññū ca  
sandhicchedo ca yo naro*; (d) *jiranti ve rājapathā sucitā*; (e) *pañca chinde,  
pañco jalo, pañca c' uttaro bhāvaye*; (f) *mātaraṃ pitaraṃ hantvā rājāno  
dee ca khattiye*; (g) *urago jinnam iva tacam purāṇam*.
3. Explain in Pāli one of the following two stanzas :— 8
- (a) *Na taṃ daḥhaṃ bandhanaṃ āhu dhīrā yad āyasaṃ dārujaṃ  
babbaḥaṃ ca|  
sārattharattā maṇikuṇḍaleso puttesu dāresu ca yā apekhā||  
etaṃ daḥhaṃ bandhanaṃ āhu dhīrā||*
- (b) *Sakaṃ hi dhammaṃ paripuṇṇam āhu, aññassa dhammaṃ  
paṇa hīnaṃ āhu|  
evam pi viṃṣayha vivādiyanti, sakaṃ sakaṃ sammutim  
āhu saccaṃ||*
4. Cite a few instances of old Vedic forms of substantives and verbs 10  
occurring in the *gāthās* of the *Dhammapada* and the *suttas* of the *Sutta-  
nipāta*. State how far, if at all, these can be treated as genuine Pāli  
forms.
5. Either, (a) 'Buddhism is often described as an ethical religion.' 10  
Adduce proofs of this from your texts.  
Or, (b) Deduce the fundamental principles of Buddhism from the 10  
*Dhammapada*.
6. Summarize the teaching EITHER of the *Appamāda* OR of the *Sahas-  
saṃsagga*, bringing out the historical importance of each. 10
7. Translate the following stanzas into idiomatic English :— 80
- Kadā 'haṃ Mithilāṃ phitaṃ visāṃ sabbatopabhaṃ|  
pahāya pabbajissāmi, taṃ kadāsu bhavissati||  
Kadā anieparaṃ rammaṃ vibhattaṃ biḍḍaso mitaṃ|  
pahāya pabbajissāmi, taṃ kadāsu bhavissati||  
Kadā 'haṃ dhanuggahe sabbālanākāra-bhūsite|  
nilavammadhare sūre cāpabhatthe kalāpīne|  
pahāya pabbajissāmi, taṃ kadāsu bhavissati||  
Kadā sattasatā bhariyā sabbālanākārabhūsitā|  
pahāya pabbajissāmi, taṃ kadāsu bhavissati||  
Kadāsu maṃ sovaṇṇaratthā sannadhaṃ ussitaddhaḥ|  
dipā atho pi veyyagghā sabbālanākārabhūsitā||  
Ārūhā gāmaṇi, ehi cāpabattthehi vammehi|  
yantaṃ maṃ nānuyissanti, teṃ kadāsu bhavissati||*

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## A. Milinda

*Answers any THREE questions*

## 1. Translate into English :—

7

Bhante Nāgasena, ime tithiyā evaṃ bhananti : yadi Buddho pūjaṃ sādīyati na parinibbuto Buddho, saṃyutto lokena antobbhaviko lokasmiṃ lokasādhāraṇo, tasmā tassa kato adhikāro vaṇiḥo bhavati aphaḥo; yadi parinibbuto, viṣampiyutto lokena nissaṇṇo sababbhavehi, tassa pūjā na uppajjati, parinibbuto na kiñci sādīyati, asādīyantassa kato adhikāro vaṇiḥo bhavati aphaḥo ti. Ubhatokotiḥo eso pañho, n'eso viṣayo, bhind' etaṃ dīṭṭhijālaṃ, ekampse ṭhapaya, tav' eso pañho anuppatto, anāgatānaṃ Jinaputtānaṃ cakkhūṃ dehi paravādaniggahāyāti.

Summarize the argument advanced by Nāgasena in his answer to the question involved in the passage quoted above.

7

## 2. Translate into English :—

7

Ye te mahārāja arahanto khīṇāsavaṃ dhotamalaṃ paṇṭakilesaṃ vusita-vanto katakaraṇiṇyā ohitābhāra anuppattasadatthā parikkhīṇabhavasamyojanāṃ pattaputisambhidaṃ sāvakaabhūmisu parisuddhā, tesam taṃ cittāṃ sāvakavisaye laṇhakaṃ uppajjati laṇhakaṃ pavattati, paccekabuddhaabhūmisu garukaṃ uppajjati dandhūṃ pavattati, kiṃ kārāṇaṃ : parisuddhattā sāvakavisaye, aparisuddhattā paccekabuddhavisaye.

Write grammatical and explanatory notes on the italicized words.

7

3. (a) With what aims and objects was the *Milindapañha* compiled?

6

(b) What do you know about the different versions of the *Milindapañha*?

4

(c) State the reasons for the opinion that the *Milindapañha* was originally written in Sanskrit.

4

4. State briefly the various arguments in support of Nāgasena's position that there is no soul.

14

## B. Dhammapada-Commentary

5. Write a *Ṭīkā* (commentary) in Pāli on one of the following stanzas :—

14

(a) Appamatto pamattesu suttesu bahujāgaro  
abalassam va siḥhasso hitvā yāti summedhaso' ti.

(b) Uṭṭhāpen' appamādena saṇṇamena damena ca  
dīpaṃ kayirātha medhāvī yaṃ ogho nābhikirati ti.

6. Either. State the historical facts found in the *Udenavattu*.

14

Or, Narrate in English the story of Māgandiyāvattu.

## C. Unseen

## 7. Translate into English :—

80

(a) Sāvattiyāṃ kira Avāṭhapindikassa gahapatino Nando nāma gopālako goyūṭhaṃ rakkhati aḍḍho mahaddhano mahābhogo. So kira yathā Keniyo jaṭilo pabbajjāvasena evaṃ gopālakaṭṭena rājapīṭhaṃ pariha-ranto attano kuṭumbaṃ rakkhati. So kāḷānukālaṃ pañca gorase ādāya Anāṭhapindikassa ṭantikaṃ gantvā Sattthāraṃ passaṭi, dhammaṃ suṇāti, attanovasanatthānaṃ āgamanatthāya Sattthāraṃ yāceti.

(b) Sā kira Aṅgaratthe Bhaddiyanagare Mendakasatthiputtassa Dhanadījayasetthino aggamahesiyā Sumanādeviyā kucchismim nibbatti, tassā sattavassikakāle Satthā elabrāhamapādīnaṃ bodhaneyyabandhavānaṃ upanissayasampattiṃ disvā mahābhikkhusaṅghaparivāro cārikam cāramāno taṃ nagaraṃ pāpuṃi Taṃ ca samaye Mendako gahapaṇi tasmim nagare paṇcannaṃ mahāpuṇḍīnaṃ jeṭṭhako hutvā seṭṭhiṭṭhānaṃ karoti.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

#### A. COMPARATIVE PHILOLOGY

*Attempted any FOUR questions*

1. 'Prākṛits through the inscriptional dialects reach back to the Vedic language.' Refute or justify. 10
2. Give a brief account of the languages forming the Aryan group. 10
3. What do you understand by 'phonetic change' and what are its causes? 10
4. Give the morphological classification of languages. 10
5. Explain fully with examples what you understand by *Ablaut*. 10
6. Explain the following terms with suitable examples :—*semantics, dialect and contamination*. 10

#### B. SANSKRIT GRAMMAR

(a) Decline *three* of the following bases :—**द्विष्** in the nominative singular and accusative plural; **धेनु** in the instrumental and dative singular; **असद्** in the dative singular and ablative plural; **पथिन्** in the accusative plural and genitive singular. 3

(b) Conjugate *three* of the following roots (in *parasmaṇāda* only) :—**हु** or **सु** in the present indicative, third person singular; **गम्** or **वच्** in the perfect, second person singular; **कृ** or **नी** in the aorist, third person singular; **पा** in the imperfect, third person plural or **हन्** in the imperative, second person singular. 3

(c) Derive any *three* of the following :— 3

**विजित्य, शास्त्र, शस्य, सृष्टि, and महिमन्.**

(d) Give the comparative and superlative forms of any *three* of the following :—

**युवन्, पाप, गुरु, विद्वस्.**

(e) Re-write the following, correcting all errors :—

3

आ जन्मादसावस्मिन् ग्रामे अधिवसति । अधुनेतत् परित्यक्ता नान्यत्र गच्छिष्यति.

### C. PALI GRAMMAR

(a) Account for the case-ending in four of the words in italics :— 4  
*tassa* kujjha mahārāja; *pabbajitaṃ* anupabbajimsi; *upa khāriyaṃ* doṇa;  
*gottena* Gotamo nātho; *samaṇassa* rocate saccaṃ; *annena* vasati.

(b) Name and expound the *saṃāsā* in any three of the following :— 3  
*kāsikosalaṃ*; *bahunadiko*; *adhikumāri*; *devasakho*; *pūtigandhi*.

(c) Conjugate the following roots :—*kar* or *das* (to see), in the future, 3  
 first person singular; *labh* or *div* (to 'port'), in the potential, first person  
 singular; *dā* or *vac*, in the aorist, third person singular.

(d) Illustrate the use of *ādhāra* in all its classifications. 2

(e) Derive and give the derivative meaning of any three of the follow- 3  
 ing :—*pāḍiko*, *Vediso*, *pacchima*, *moggallāyano*, *sannaddho*.

### D. TRANSLATION

Translate the following extract into Pāli :—

30

Next day the Buddhas came, took the water-pot that was consecrated to holy uses, filtered the water, washed and dried their feet, and sat down to their meal. And as they sat, the Bodhisattva came, and seating himself by them with a courteous salutation, put his question. And they answered and said, 'Prince, you will never come to be king in this city. But in Gandhāra, two thousand leagues away, there stands the city of Takkaśilā. If you reach that city, in seven days you will become king there. But there is a peril on the road thither, in journeying through a great forest. It is double the distance round the forest that it is to pass through it.

### E. ALTERNATIVE

Alternative to Question 1, GROUP B. For Burman Candidates only

(a) Name and expound the *saṃāsas* in the following :— 5  
*mattabbamaragaṃ* *scumbitavikāsitapupphavallināgarukknopa*; *obhita* *kandaro*.

(b) Use the alternative case-endings allowed by the rules of Pāli 4  
 grammar in four of the words in italics :— *dūraṃ* *gāmaṃ* āgato; *thoka*  
*muccati*; *geṇānaṃ* issaro; ārāho me rañño; *Abhidhammena* pucchati.

(c) Explain with suitable examples :— 3

(i) *sāpekkhatte* *satipi* *gamakati* *saṃāso*.

(ii) *Parokkhā*.

(d) Substitute one word for any three and explain the formation 3  
 thereof :—*sattahe* *niyutto*; *pacantaṃ* *payajati*; *dalhaṃ* *karoti*; *Aṅga-*  
*gadhehi* *āgato*; *bhayaṃ* *passituṃ* *silāṃ* *yassa*.





ايا دنياى ما لى لا ارانى

اسروك منزلا الا نبايى

(b)

و الطف لكل امرئ يرفق

و اقبل من الناس ما تيسر

فانما المرء من زجاج

ان لم يرفق به تكسر

و كل ذى سكرة فاعمى

حتى اذا ما افاق ابصر

ارض المنيا لكل طاغ

و ارض المنيا يا لمن تعجر

يا رب ذى اعظم رفات

كان اذا ما مشى قبضتر

(c)

الم تر ريب الدهر فى كل ساعة

له عارض فيه المنيّة تلمع

ايا باني الدنيا لغيرك تبذنى

و يا جامع الدنيا لغيرك تجمع

ارى المر رثابا على كل فرصة

و للمرء يوماً لا محالة مصرع

تبارك من لا يملك الملك غيره

متى تنقضى حاجات من ليس يشبع

راى امرء فى غاية ليس نفسه

الى غاية اخرى سواها تطلع

8. Answer any three of the following :—

18

(a) Write notes on the expressions underlined in Question 2.

(b) Parse according to Arab grammarians the *bais* beginning :—

راى امرء فى غاية ... and يا رب ذى اعظم ...

(c) Write a note on the *kunyah* ابر لعناهيّة , and explain what is meant by the 'dissimilation of the medial consonant' of متعذلق .

(d) Write a note on 'pre-formative mīm' in nouns, as in مصرع , for example.

4. (a) Translate the following lines :—

15

لعمرك ما ادرى رانى لارجل  
على ايننا تغدو المنيّة ازل  
وانى اخوك الدائم العهد لم اخن  
ان ابزلك خصم ارنبا بك منزل  
احارب من حاربت من ذي عداوة  
واحبس مالى ان غرمت فاعقل

(b) Explain what constituted مروة , in the opinion of the re-Islamic Arabs.

(c) Give a critical estimate of the author of the above lines, as a poet.

5. Translate the following passages :—

20

(a)  
و نعين فاعلنا على ما نابہ  
حتى نيسره لفعل السيد  
و نجيب داعية الصباح بثائب  
عجل الركوب لدعوة المستنجد  
فنفل شوكتها و نفثا حميها  
حتى تبوخ و حمينا لم يبرد  
و تحل في دار الحفاظ بيوتنا  
رغ الجمائل في الدرين الاسود

(b)  
و كم من لئيم رد انى شتمته  
وان كن شتمى فيه صاب و علقم  
و للفت عن شتم اللئيم تكرماً  
اضر له من شتمه حين يشتم

(c) Answer any two of the following :—

- (i) Is there any rhetorical figure in the passages in Question 5?
- (ii) Write a short note on the end-rhyme in Arabic poetry.
- (iii) Alliteration is a characteristic of early poetry. Can you exemplify its use among the Arabs?

6. (a) Explain in Arabic the following lines :—

14

ذَلُّوا لِمَلِكٍ إِيَّانَ اللَّهِ صَاحِبِهِ  
مَرُوسَى سَلِيمَانَهُ وَالسَّيْفَ خَاتَمَهُ  
وَسَلْمُوهُنَّ وَرَدَدَا أَعْلَاهَا وَرَمَضُوا  
وَالثَّغْرَ مِنْ فَرْحٍ يَفْتَنُ بِأَسْمِهِ  
كَأَنَّهُمْ أَبْصَرُوا مَا قَدْ مَضَى زَمْنًا  
كَمَا يَرَى مَزْعِجُ الْأَحْلَامِ نَائِمَهُ  
أَشْبَهَتْ جَدَّكَ إِبْرَاهِيمَ وَاتَّفَقَتْ  
عَلَى عِزَائِكَ الْعَلِيَا عِزَائِمَهُ

(b) Either, Write a short note explaining the allusions in these lines.

Or, Scan one of the lines and name the metre.

## SECOND PAPER

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

1. (a) Give the context and translate into English :—

15

(أَفَأَمْنْتُمْ أَنْ يَخْشِفَ بِكُمْ جَانِبَ الْبَرِّ) أَيِ الْأَرْضِ  
كَقَارُونَ (أَوْ يَرْسِلَ عَلَيْكُمْ حَاصِبًا) أَيِ يَرْمِيكُمْ بِالْحَصْبَاءِ كَقَوْمِ  
لُوطٍ (ثُمَّ لَا تَجِدُوا لَكُمْ وَكِيلًا) حَافِظًا مِنْهُمْ (أَمْ أَمْنْتُمْ أَنْ  
يَعِيدَكُمْ فِيهِ) أَيِ الْبَحْرِ (تَارَةً) مَرَّةً (آخِرِي) فَيَرْسِلَ عَلَيْكُمْ  
قَاصِفًا مِنَ الرِّيحِ (أَيِ رِيحًا شَدِيدَةً لَا تَمُرُّ بِشَيْءٍ إِلَّا تَصْفَهُ  
فَتَكْسِرُ فَلَئَكُمْ) (فَيَغْرِقُكُمْ بِمَا كَفَرْتُمْ) بِكَفَرِكُمْ (ثُمَّ لَا تَجِدُوا لَكُمْ  
عَٰلِينَ بِهِ تَبِيعًا) نَصِيرًا أَوْ تَابِعًا يَطَالِبُنَا بِمَا فَعَلْنَا بِكُمْ (وَلَقَدْ

كُرمنا) فضلنا (بنى آدم) بالعلم والنطق واعتدال الخلق  
وغير ذلك ومنه طهارتهم بعد الموت (ر حملناهم فى  
البر) على الدراب (والبكر) على السفن (ر رزقناهم  
من الطيبات) فضلناهم على كثير ممن خلقنا) كالبهائم والوحوش  
(تفضيلاً) \*

(b) Give the story of قارون, and of لوط to which reference is made in the above extract. 6

(c) Explain the uses of ف and ثم in the above extract. 3

(d) Give the various uses of ما and explain its use in بما كفرتم in the above extract. 3

(e) Give the various kinds of مفعول and point out their respective places in a sentence. Illustrate your answers with an example. 5

2. (a) Translate with reference to the context :—

15

يا هذا ! اهلك على ذنوبك ، ر كن حزبياً رجلاً قبل  
ان ياتى يوم الحسرة وانت مطرق خجلاً ، ر كن على  
طلب الخلاص بالاخلاص مستسهلاً قبل ان يصير دمعك  
اذا صغى سمعك منهملاً ، كيف تكون حالك اذا خرج  
الخلائق من القبور ر فار البحر المسجور وتدكدكت الجبال  
ر الصخور ر تمزقت السماء وهى تمرور ر تقطعت الارض  
ر هى تحور فهل ترى فى ذلك اليوم من فتور . كيف  
تكون حالك اذا انكشفت غدا الامور وانهتكت من المذنبين  
الستور ، ربرز العدل الذى لا يجور ، ر ذل كل جبار فجور ،  
ر تجلى العزيز الصبور ر حيل بينك ر بينه يا مغرور ،  
فناديت بالويل والثبور ، كيف تكون حالك اذا قدمت  
غدا النجب للمطيعين وانقطعت انت فى جملة المنقطعين \*

(b) Write grammatical notes on :—

10

يا هذا - اهلك - كن - فار - تجور

8. Write a short essay in Adabic on the style of al-Hariri, and point out its merits and demerits. 15

4. Give a short description of the caliphate of المأمون as it is given in your text. 8

5. Give a short sketch of the life and works of ابن الجوزى .10

6. Explain with reference to the context any three of the following :— 9

(١) الجادع مارن انفه بكفه

(٢) هكذا يكون التعامى \* هكذا هكذا يكون الغرور

(٣) على اننى راض بان احمل الهوى

ر اخلف منه لا على ولا ليا

(٤) فخل عنها ر لا تركن لزهرتها

فانها نعم فى طيها نغم

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following extracts :—

(a)

35

ان وجد كل يوم فى ازدياد \* و الهوى يأتى على غير مراد  
يا خليلي لا تلمني فى الهوى \* ليس لى مما قضاه الله راد  
ان اذا لم اهر غزلان النقا \* اى فرق بين قلبى و الجماد  
منتهى الامال عذى اهيف \* و حفرن رانها ذاك السواد  
و خدد تذلظى حمرة \* و دالا قد نفى عنى الرقاد  
ان ذنبى عدد من يعدلنى \* ان قلبى فى الهوى لورد عاد  
يا أهيل المشرق هل من منجد \* هل سلا الاحباب ذر وجد رساد  
ما احتيالى فى الهوى ما عملى \* ليس لى الا على الله اعتماد  
بين جفنى و الكرى معترك \* و اختلاف و شقاق و عناد  
فتفتنى ظبى ظريف اهيف \* كلما قلت جفاه زال زاد  
ان يكن عشقى له افسدننى \* فاعلموا انى راض بالفساد  
ورشادى ان يكن فى سلوتى \* فدعونى لست ارضى بالرشاد  
(b) يا عارف الافلاك هل لك حاصل من شمسها او خمصها 36

المتعبرة ضيعت عمرك فيما لا ينفعك مقال حبه - ونسيت

حديث من عرف نفسه فقد عرف ربه - بدنك بيتك سكنت فيها  
 عمرأ لم تعرف سقفه و جدرانہ - ; جسدك دارك اقامت فيه دهرأ  
 لم تعلم اركانہ و حيطانہ - فهلا عرفت آفاق الانفس و مطالع  
 الادراك - و ضمنت تشريح الابدان الى تشريح الافلاك - و هلا  
 فكرت فى نفسك و آلتها - و نظرت الى عينك و طبقاتها - و الى  
 سمعك و صفاته و الى لسانك و لغاته - تدرك بؤهم - و تبصر  
 بشعم - و تسمع بعظم - و تنطق بلحم - فان كانت لك فكره -  
 ففى عضو مذك عبه - اما تنفكر فى افراد الانسان انهم اشباه  
 و امثال - كيف اتحدوا فى النوع و اختلفوا فى الصور و الاشكال -  
 و كيف تغايروا بالحياة و الالوان و اصوات - و تباينوا فى الاخلاق  
 و الاراء و الصفات \*

(c) كان فى مدينة هال بجرمانية رجل يعلم التشريح يدعى 35  
 جونكر فعمل له يوماً جثتا رجلين مشنوقين مذنبين ليشرحهما امام  
 تلامذته حين التعليم - فلم يجد فى الوقت مفتاح سجليس الدرس  
 ليدخلهما فيه - فوضعهما فى محل بينه و بين حجرته الى يمام  
 فيها منفذ - و فى الليل قعد يكتب عادته قبل النوم بعد ان  
 مضى نصف الليل و غطس فى النوم جميع عياله و اهل بيته  
 ان سمع صوتاً من ذلك المحل الذى فيه القتيلان - فظن ان  
 القط الذى فى بيته بقى المحل و اقبل عليه - فقام و اخذ فى  
 يده شمعة و قصد المحل لينظر ذلك - و لما فتح الباب رأى جوالق  
 الجثتين مشقوقاً من الوسط - فتعجب منه و قرب ليتأمله - فلم  
 يجد فيه الا جثة واحدة مع ان ابواب المحل و ابواب شبائيكه كلها  
 مغلقة باحكام لا يمكن لاحد ان يدخل منها حتى ياخذ الجثة \*

## 2. Translate into Arabic :-

There once lived in a great city, where the dead were all but innumerable, a young man by the name of Nicholas Vane, who possessed a singular genius for the making of tombstones. So beautiful they were, and so fitly designed to express the shadowy pain of mortal memory or the bright forecasting of eternal hope, that all

persons were held fortunate who could secure them for the calm resting-places of their beloved. Indeed, the curious tale was whispered round that the bereft were not his only patrons, but that certain personages who were peculiarly ambitious of posthumous fame had gone to his shop and secretly advised with him respecting such monuments as might preserve their memories from too swift oblivion.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any three of the following passages into English :— 15

(a)

أَذَانٌ عَنْ عَذْبِ الرُّوْدِ بَارِضَةٍ \* وَاحَادٍ عَنْهُ وَفِي نَقَاهُ بِقَالِي  
وَرُبْعِهِ ارْبَى اجْلٍ وَرَبِيعِهِ \* طَرِبِي وَصَارَفِ اَزْمَةَ اللِّارِ  
وَجِبَالِهِ لِي مَرِيعٍ وَرَمَالِهِ \* لِي مَرْتَعٍ وَظِلَالِهِ اَفْيَاسِي  
وَتَرَابِهِ نَدَى الذِّكَى وَمَاءُهُ \* رَرْدِي الرُّوْدِي وَفِي ثَرَاهُ ثَرَايِي  
وَشَعَابِهِ لِي جَنَّةٌ وَقَبَابِهِ \* لِي جَنَّةٌ وَعَلَى صَفَاهُ صَفَايِي

(b)

وَلَيْلُ كَمُوجِ الْبَحْرِ ارْخَى سَدْرَهُ \* عَلَى بَانَواعِ الْهَمُومِ لِيَبْلِي  
فَقُلْتُ لَهُ لِمَا تَمْطِي بِصَلْبِهِ \* وَارْدَفِ اعْجَازًا وَنَاءً بِكُلِّ  
اِلَّا اِيْهَا اللَّيْلُ الطَّوِيلُ اِلَّا اَنْجَلِي \* بِصَبْمٍ وَمَا اِلَّا صَبَاحُ مَنَازِلِ  
فِيَا لَكَ مِنْ لَيْلٍ كَانَ لِحُومِهِ \* بِامْرَاسٍ كَتَانٍ اِلَى صَمِّ جَنْدَلِ

(c)

بَلْ اَنْتِ لَا تَدْرِيْنَ كَمْ مِنْ لَيْلَةٍ \* ظَلَقَ لِذِيذِ لَهْوِهَا وَنَدَامِهَا  
قَدْ بَتَّ سَامِرُهَا وَغَايَةِ تَاجِرٍ \* رَافِيَتِ اِذْ رَفَعَتْ وَعَزَمَدَامِهَا  
اَعْلَى السَّبَاءِ بِكُلِّ اِدْكَنْ عَاتِقٍ \* اَرَجُونَةُ قَدَمَتْ وَفَضَّ خَتَامِهَا  
وَصَبْرُوحٌ صَافِيَةٌ وَجَذْبٌ كَرِيْنَةٌ \* بِمُورْتَرٍ تَأْتَالُهُ اِبْهَامِهَا  
بَادَرَتْ حَاجَتُهَا الدِّجَاجُ بِسَحْرَةٍ \* لَاعِلٌ مِنْهَا حَيْنَ هَبِّ نِيَامِهَا

(d)

لِذَاكَ اِهْيَيْبْ عِنْدِي اِذَا اَكَلَمَهُ \* وَقِيلَ اِنَّكَ مَنَسْرُوبٌ وَمَسْئُولُ  
مِنْ خَادِرٍ مِنْ لِيْثٍ اَلْاَسَدِ مَسْكَنُهُ \* مِنْ بَطْنِ عَثْرٍ غَيْلٍ دُونَهُ غَيْلُ

يغدر فيلحم ضرغامين عيشهما \* لحم من القوم مغفور خراويل  
اذا يسار قرنا لا يحل له \* ان يترك القرن الا وهو فلول  
منه تظل سباع الجور ضامرة \* و لا تمشى بواديه الازاحيل

2. (a) Point out the figures of speech in extract (a) of Question 1. 12

(b) Why are *المعلقات* so called? When and by whom was this collection compiled? Give the names of all the poets who composed a *معلقة*.

3. Explain with reference to the context any *two* of the following extracts :— 15

(a)

نخمر ولا كرم و آدم لى اب \* و نرم ولا خمر و لى امها ام  
ولطف الارنى فى الحقيقة تابع \* للطف المعانى والمعانى بها تنمر  
وقد وقع التفريق و الكل واحد \* فارواحنا خمر و اشباحنا كرم  
ولا قبلها قبل ولا بعدها بعد \* و قبلية الابعاد فهمى لها حتم  
وعصر المدى من قبله كان عصرها \* و عهد ايينا بعدها و لها يتم

(b)

شركت بماء الدحرضين فاصبحت \* زوراء تنفر عن حياض الديلم  
و كانما تنأى بجانب دنها \* الروحشى من هزج العشى مؤرم  
هر جنيب كلما عطفت له \* غضبى اتقاها باليدين وبالقم  
بركت على جنب الردام كانما \* بركت على قصب اجش مهضم

(c)

نواجة رهوة الضبعين ليس لها \* لما نعى بكرها الذاعون معقول  
تفرى اللبان بكفيها و مدرعها \* مشقتى عن تراقبها رعايل  
تسعى الرشاة جنابيه و قولهم \* انك يا ابن ابى سلمى لمقتول  
و كال كل خليل كنت آمله \* لا الهينك انى عندك مشغول

4. Answer any *three* of the following :—

(a) Write a biographical sketch of Ibn-al-Fārid and mention the distinctive features of his poetry.

(b) State what impression you have formed of pre-Islamic poetry. Which of the old Arabic poems you have read do you like best, and why?

(c) Give an account of the life of Ka'b-ibn-Zuhair and describe the circumstances under which his poem *بازمت سعاد* was composed.

(d) Name and describe the best known collections of pre-Islamic poetry. For what reasons did the Muslim scholars collect and annotate this poetry?

(e) Expound the Sufi doctrine of the 'Perfect Man' (al-insān al-kāmil).

15



5. Paraphrase in clear and simple Arabic the following :—

12

(a)

اصام ترى برق اريك وميضه \* كلع اليديين فى حبي مكلل  
يضى سناه ارمصاييم راهب \* امال السليط بالذبال المقتل  
تعدت له مصعبتى بين فارج \* ر بين العذيب بعد ما متامل

(c)

ر لها هباب فى الزمام كانها \* صهباء خف مع الجذب جهامها  
ارملع رسقت لاحق لاحه \* طرد الفحول وضربها وكدامها  
يعلربها حدب الاكام مسح \* قد رابه عصيانها روحامها

6. (a) Re-write extract (a) of Question 5 with full vowel-points.

11

(b) To how many things is برق compared in lines 1 and 2 in Question 5 (a)? Which simile in your opinion is the best, and why?

(c) Explain the following :—

يرم بدارة جلجل - خذروف الزليد - مروايد عرقوب - نسج دارون

7. Translate into Arabic :—

20

The king of Ceylon sent to al-Hajjāj some women who were born in his country as Muslims, their fathers, who were merchants, having died. But the ship in which they were was captured by pirates of Daibul. So al-Hajjāj wrote to Dāhar, the king of Sind, asking him to set free the women. But Dāhar said: 'Robbers have captured them, I have no control over them.' Al-Hajjāj thereupon sent 'Ubaidullāh and after him Budail to raid Daibul, but both were killed. Al-Hajjāj then made elaborate preparations for the invasion of Sind.

### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

20

(و لقد سبقت كلمنا لعبادنا المرسلين) اى وعدنا لهم بالنصر  
و الغلبة و هو قوله (انهم لهم المنصورون و ان جندنا لهم  
الغالبون) و هو باعتبار الغالب و المقتضى بالذات و انما  
سماه كلمة و هى كلمات لانتظامها فى معنى واحد (فتول عنهم)  
فامرض عنهم (حتى حين) هو الموعد لنصرك عليهم و هو

يوم بدر وقيل يوم الفتح (رابصرهم) على ما ينالهم حينئذ والمراد بالامر الدلالة على ان ذلك كائن قريب كانه قدامه (فسوف يبصرون) ما قضينا لك من التأييد والنصرة والثواب فى الآخرة وسوف للوعيد لا للتباعد - (أفبعذابنا يستعجلون) روى انه لما نزل فسوف يبصرون قالوا متى هذا ففزلت (فاذا نزل بساحتهم) فاذا نزل العذاب بفنائهم شبهه بجيش هجمهم فاناخ بفنائهم بغتة وقيل الرسول وقري نزل على اسناده الى الجار والمجرور ونزل اى العذاب (فساء صباح المذرين) فبئس صباح المذرين صباحهم واللام للجنس والصباح مستعار من صباح الجيش المبين لوقت نزول العذاب ولما كثر فيهم الهجوم والغارة فى الصباح سموا الغارة صباحا وان وقعت فى وقت آخر \*

2. Give an account either of the يوم بدر , or of the يوم الفتح 10  
and show how either of these fulfils the promise of divine succour referred to in the extract in Question 1.

3. Reproduce in simple Arabic the account of the spread of 10  
Christianity in Najran (ابتداء رقع النصرانية بدجران) according to Ibn Hishām.

4. Explain with reference to the context :— 15

هذا هو المقصود الاصلى بالنظر الى علم البيان اى بحث الحقيقة والمجاز والمقصود الاصلى بالنظر الى علم البيان هو المجاز ان به يتأتى اخلاص الطرق دون الحقيقة الا انها لما كانت كالاصل للمجاز ان الاستعمال فى غير ما وضع له فرع الاستعمال فيما وضع له - جرت العادة بالبحث عن الحقيقة اولاً (وقد يقيدان بالعربيين) لىتميز عن الحقيقة والمجاز العقليين الذين هما فى الاسناد - الاكثر ترك هذا القيد لئلا يتوهم انه مقابل للشرعى والعرفى - (الحقيقة) هى الاصل فعيل بمعنى فاعل من حق الشيء اذا ثبت او بمعنى مفعول من حققته اذا اثبتته

ثم نقل الى الكلمة الثابتة او المثبتة فى مكانها الاصلى و التاء فيها  
للتنقل من الرصيفية الى الاسمية \*

5. Give the substance of Ibn Khaldun's discourse on revelation and dreams (الكلام فى الوحي و الرؤيا) 15

6. Translate into English, adding explanatory notes where necessary :— 10

وانظر الى ما نقل فى نزول سورة برائة فى غزوة تبوك  
وانها كلها او اكثرها عليه رهو يسير على ناقته بعد ان كان بمكة  
ينزل عليه بعض السورة من قصار المفصل فى وقت وينزل  
الباقى فى حين آخر - وكذلك كان آخر ما نزل بالمدينة آية  
الدين و هى ما هى فى الطول بعد ان كانت الآية تنزل بمكة \*

7. Translate into simple Arabic :—

20

These *Hunafā* did not form a community. They were the agnostics of their day, each seeking truth by the light of his own inner consciousness. Muḥammad, son of 'Abdu'llah, became one of these. It was his practice to retire with his family for a month of every year to a cave in the desert for meditation. His place of retreat was Hira, a desert hill not far from Mecca, and his chosen month was Ramaḍān, the month of heat. It was there one night toward the end of his quiet month that the first revelation came to him when he was forty years old. He was asleep or in a trance, when he heard a voice say: "Read!" He said: "I cannot read." The voice again said: "Read!" He said: "I cannot read." A third time the voice, more terrible, commanded: "Read!"

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

### A

## MUSLIM HISTORY

*Answer any THREE questions*

1. Estimate the character and achievements of 'Umar I. 10
2. Give a brief account of the tragedy of Karbala and of the events which led up to it. 10
3. Give an account of the intellectual development of the Saracens under Ma'mūn. 10
4. Give a general review of Spain under the Arabs. 10

## B

## HISTORY OF ARABIC LITERATURE

*Answer any FOUR questions*

1. Give an account of any one of the five typical poets of the 'Abbāsid period with a brief statement of the peculiarities of his poetry. 10
2. Trace the history of the growth of Arabic prose during the 'Umayyad period. 10
3. Give a brief account of Arabic literature during the period following the Mongol invasion. 10
4. Determine the place of Al-Ghazālī in Arabic literature. 10
5. Give an account of the poetry of the Spanish Arabs. 10

## C

## RHETORIC AND PROSODY

*Answer any THREE questions*

1. Scan the following and name the metre :— 10  
 إنما الدنيا فناء \* ليس للدنيا ثبوت  
 إنما الدنيا كبيت \* نسجه العنكبوت
2. Write notes on the following :— 10  
 (a) زحاف ; (b) علة ; (c) ضرورة الشعر ; (d) إبطاء
3. Distinguish between الحقيقة and المجاز . Give examples of 10  
 each.
4. Define and give examples of the following :— 10  
 (a) تجنيس القلب ; (b) التورية or الإيهام ; (c) اللف والنشر ;  
 (d) بدعة الاستهلال .

## ARABIC--PASS

## FIRST PAPER

*Examiners*— { MAULVI A. F. M. ABDUL KADIR, M.A.  
SHAMSUL-ULAMA MAULVI MD. AMIN ABBASL.  
KHAN BAHADUR MD. HASSAN.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

10

(a)

لا عذر لى قد اتى المشيب \* فليت شعرى متى اتوب  
ابليس قد غرنى و نفى \* و مسنىٰ منهمما للغرب  
و لست ادرى اذا اتانى \* رسول ربىٰ بما احيى  
هل انا عند الجواب مئى \* اخطيٰ فى القول ام اصيب  
لم انا يوم الحساب ناج \* ام لى فى قاره نصيب  
يارب جد لى على رجائى \* بمنة منك لا احيى

(b)

طلبت المستقر بكل ارض \* فلم ار لى بارض مستقر  
اطعت مطامعى فاستعبدتنى \* و لو انى قذعت لكنت حرا

من المتقارب

(c)

امنى تخاف انتشار الحديث \* و حظى فى صونه اوفر  
ولو لم يكن فيه معنى عليك \* نظرت لنفسى كما تنظر

(d)

سلام على اهل القبور الدارس  
كانهم لم يجلسوا فى المجالس  
و لم يبلغوا من بارد الماء لذة  
و لم يطعموا ما بين رطب و يابس

ولم يك منهم فى الحياة منافس  
طويل المنى فيها كثير الوسوس  
لقد مرتهم فى موحش الترب والثرى

و انتم بها ما بين راج و آئس

2. (a) Write notes on six of the underlined expressions in Question 1. 15  
(b) Write out any four verses in Question 1 with full vowel-points.

3. 'Abul-'Atāhiyah was neither a great sinner nor a great saint; meanness entered too deeply for either into his nature.' Discuss this remark. 10

4. Explain in Arabic the meaning of the following:— 10

و انى لانسى عند كل حفيظة  
اذا قيل مولاك احتمال الضغائن  
وان كان مولى ليس فيما ينوبنى  
من الامر بالكفى ولا بالمعادر

5. Translate into English:— 18

(a)  
احب الفتى ينفى الفواحش سمعة  
كان به عن كل فاحشة وقرا  
سليم دراعى الصدر لا باسطا اذى  
ولا مانعا خيرا ولا قائلا هجرا  
اذا شئت ان تدعى كريما مكرما  
اديبا ظريفا عاقلا ماجدا حورا  
اذا ما اتت من صاحب لك زلة  
فكن انت محتالا لزلته عذرا  
غنى النفس ما يكفيك من سد خلة  
فان زاد شيئا عاد ذاك الغنى فقرا

(b)

اعاذل ما عمري وهل لى رقد اتس  
بذاتى على خمس وستين من عمري

رأيت إخا الدنيا وان كان خافضا  
 إخا سحر يسرى به رهو لا يدري  
 مقيمين فى دار ذرور ونغدى  
 بلا أهبة الثارى المقيم ولا السفر

6. Render into simple Arabic the following:—

14

(a)  
 سل الكلى والطفى يا من يساجله  
 فالرمح ناظمه و السيف ناثره  
 تنجست بدم القتلى صوارمه  
 و طهرت بيد التقوى مازره  
 جم النوال سريع البطش متد  
 كالدهر يرجى كما تخشى بوايره  
 اذا حبا اغنت الايدى مواهيه  
 و ان سطا سدت الدنيا عساكره

(b)  
وقال يمدحه رهى من القصائد المرقصه

ر الله لو قيس به حاتم \* لقل ما قد قيل فيه وهان  
 ذا يملأ الارض باحسانه \* و ذاك يمتن بملء الجفان  
 يروى العلى عن نفسه عن اب \* عال فما فى نصه عن فلا

7. (a) Write notes on any six of the expressions underlined in Question 6, explaining also any allusions contained in them. 16

(b) Write a short note either on pre-Islamic burial customs, or on pre-Islamic notions as to existence after death.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following :—

22

## A

( علم ان ) مخففة من الثقلية اى انه ( لن  
تصوره ) اى الليل لتقوموا فيما يجب القيام فيه الا بقيام  
جمعه و ذلك يشق عليكم ( فتاب عليكم ) رجع بكم الى  
التخفيف ( فاقروا ما تيسر من القرآن ) فى الصلوة بان تصلوا  
ما تيسر ( علم ان ) مخففة من الثقلية اى انه ( سيكون منكم  
مرضى و آخرون يضربون فى الارض ) يسمرون ( يبتغون من  
فضل الله ) يطلبون من رزقه بالتجارة و غيرها ( و آخرون يقاتلون  
فى سبيل الله فاقروا ما تيسر منه ) كما تقدم ( و اقيموا الصلوة )  
المفروضة و كل من الفبق الثلث يشق عليهم ما ذكر فى قيام  
الليل فخفف عنهم بقيام ما تيسر منه ثم نسخ ذلك بالصلوة  
الخس ( و آتوا الزكاة و اقضوا الله ) بان تدفقوا ما سوى المقرض  
من المال فى سبيل الخير ( قرضا حسدا ) عن طيب قلب \*

## B

ثم حسر رده عن ساعد شديد الاسر ' قد شد عليه جبائر  
المكر لا الكسر ' متعرضا للاستمache ' فى معرض الرقاعة ' فاختلف  
به اولئك الملاء حتى اترع كفه و ملا ' ثم انحدر من الربوة جدلا  
بالعبوة - قال الرازي فجاذبته من روائه حاشية روائه - فالتفت  
الى مستسلما ' و راجهني مسلما فاذا هو شيخنا ابو زيد بعينه و  
مينه نقلت له : —

الى كم يا ابا زيد \* انانينك فى الكيد \* لينهاش لك  
الصيد و لا تعباً بمن ذم -  
فاجاب من غير استحياء و لا ارتياء و قال : —



تبصر و دع اللوم \* و قل لى هل تري اليوم \* فتى لا تقمر  
القوم \*

متى ما دسته تم - فقلت له بعدالك يا شيخ النار و زاملة  
العار فما مثلك في طلالة علانيتك و خبطة نيتك ' الا مثل روث  
مفضض اركنيف مبيض - ثم تفرقنا فانطلقت ذات اليمين و  
و انطلق ذات الشمال و نارحت مهيب الجنرب و نارج مهيب  
الشمال \*

C

و ذكر يحيى بن سليم كاتب الفضل بن ربيع لم يرفي  
دار المنصور لهو قط و لا شىء يشبه اللهو و اللعب و العبث -  
و ذكر اسحاق ابن موسى بن عيسى ان المنصور رلي رجلا من  
العرب حضرموت فكتب اليه و الى البريد انه يكثر الخروج الى  
الصيد ببزاة و كلاب قد اعداها فعزله و كتب اليه تكلتك امك و  
عدمك عشيرتك ما هذه العدة التي اعدتها للذكاة في الوحش  
انا انما استكفيك امور المسلمين و لم نستكفك امور الوحش  
سلم ما كنت تلى من عملنا الى فلان بن فلان و الحق باهلك  
ملوما مدحورا - و ذكر عدة من بني هاشم ان المنصور كان شغله  
في صدر نهاره بالامر و النهي و الولايات و العزل و شحن الثغور  
و الاطراف و امن السبل و النظر في الخراج و النفقات و مصالحة  
معاش الرعية لطرح عيالتهم و التلطف لسكونهم و هذئهم ' فاذا صلى  
العصر جلس لاهل بيته الا من احب ان يسامره - فاذا صلى  
العشاء الاخرة نظر فيما ورد عليه من كتب الثغور و الاطراف و الافاق  
و شاور سماره من ذلك فيما ارب فاذا مضى ثلث الليل، قام الى  
فراشه و الضرف سماره \*

- |   |   |
|---|---|
| 2. (a) Explain in Question 1 A. مخففة من المثقلة اى انه | 3 |
| (b) Give of التركيب النحوى بعدالك in Question 1 B.      | 4 |
| (c) Explain تكلتك امك in Question 1 C.                  | 8 |
| (d) Differentiate between نوجه , رجه , و راجه           | 8 |

(e) Correct or justify any five of the following, giving reasons for your answer :—

5

- (١) الشمس طلع (٢) يا شيخ النار  
(٣) سمار السلطان انصرف (٤) ان تضرب ضربت  
(٥) صار المطر (٦) ما احسن زيداً رجل  
(٧) اذن انى اضربك

8. Explain with reference to the context :—

10

(a) يا هذا خفى عليك مرض اعتقادك ، فالتبس الشعمر بالورم <sup>٢</sup> جهلت قيم المعادن فبعت الشبه بالذهب ، فسد حسن ذوقك فتفككت بحذلة - اين حرصك من اجلك ، اين قولك من عملك يدركك الحياء من الطفل فتتحامى حمى الفلمشة فى البيت بسببه ثم تواقعها بعين خالق العين و مقدار الكيف و الاين . قالته ما فعل فعلك بمعبوده من قطع بوجوده \*  
(b) و اعمل فى الخلافة اذا طوقها الله عمل المريد لله الخائف من عقابه ، عذابه ، و لا تغتر بالله و مهلته ، فكان قد نزل بك الموت - الرعية الرعية فان الملك بهم \*

4. Give a short description of the بلاد الحبشة as it is given by

10

القزوينى

5. Render in simple Arabic :—

16

و قد قدر الارزاق من ليس عادلا  
عن العدل بين الخلق فيما يقدر •  
فلا تامين الدنيا و ان هى اقبلت  
عليك فما زالت تخون و تغدر  
فما تم فيها الصفو يوما لاهله  
و لا الرفق الا ريثما يتغير  
و ما لاح نجم لا و لا ذر شارق  
على الخلق الا حبل عمرك يقصر  
تطهر و الحق ذنبك اليوم توبة  
لعلك منه ان تطهرت تطهر

6. (a) Give the substance of the letters of عمر بن عبد العزيز عبد الرحمن بن نعيم and عقبة بن زرعة to

(b) Write notes on any two of the following :—

جابر - الحارثي - هارون الرشيد

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following extracts :—

(a)

قال الشاعر \* 35

الناس من جهة التمثال اكفاء  
ابوهم آدم و الام حواء  
فان يكن لهم في اصلهم شرف  
يفاخرون به فالطين و الماء  
ما الفخر الا لاهل العلم الهم  
على الهدى لمن استهدى ادلاء  
و قد ر كل امرئ ما كان يحسنه  
و الجاهلون لاهل العلم اعداء

- (b) • 35  
يزن العميري و كان يكنى بابن مرة حتي قدب الى قيصر ملك  
الروم فشكا اليه ما هم فيه و ساله ان يخرجهم عنه و يليهم هو بيعت  
اليهم من شاء من الروم فيكون له ملك اليمن \* فلم يشكه \*  
فخرج حتى اتى النعمان بن المنذر و هو عامل كسرى على  
الحيرة و ما يليها من ارض العراق فشكا اليه امر العبدشة \*  
فقال له النعمان : ان لى على كسرى وفادة فى كل عام فاتم  
حتى يكون ذلك \* ففعل ثم خرج معه فادخله على كسرى \*  
فقال سيف بن ذي يزن : ايها الملك غلبنا على بلادنا الاغربة

فجئتك لتنصرني و يكون ملك بلادى لك \* قال : بعدت  
بلادك مع قاة خيرها فلم اكن لارط جيشا من فارس بأرض العرب  
لا حاجة لى بذلك \* ثم اجازة كسرى بعشرة آلاف درهم وكساه  
كسوة حسنة \*

86 (c) الايمان على اربع دعائم : عنى الصبر و اليقين و  
العدل و الجهاد \* و الصبر على اربع شعب : على الشوق و الشفق  
و الزهادة و التقرب \* فمن اشتاق الى الجنة سلا عن الشهوات و  
من اشفق من النار رجع عن الحرامات و من زهد فى الدنيا  
تهارن بالمصيبات \* و اليقين على اربع شعب : على تبصرة  
الفطنة و تأويل الحكمة و موعظة العبرة و سنة الارلين \* فمن تبصر  
الفطنة تأول الحكمة و من تأول الحكمة عرف العبرة و من عرف  
العبرة فكأنما كان فى الارلين \* و العدل على اربع شعب : على  
غامض الفهم و زهرة الحلم و روضة العلم و شرائع الحكم \* فمن  
فهم فسر جميع العلم و من علم عرف شرائع الحكم و من حلم لم  
يفرط امره و عاش فى الناس \* و الجهاد على اربع شعب : على  
الامر بالمعروف و النهى عن المنكر و الصدق فى المواطن و شأن  
الفاستقين \* فمن امر بالمعروف شد ظهر المؤمن و من نهى عن  
المنكر ارم انف المنافق و من صدق فى المواطن فقد قضى الذى  
عليه و من سني الفاستقين فقد غضب الله و من غضب الله غضب  
الله له \*

85 (d) روى ان راصل بن عطاء ابا حذيفة اقبل فى رفقة  
فاحسرو الخوارج فقال راصل لاهل الرفقة : ان هذا ليس من  
شأنكم فاعزلوا و دعوني و اياهم \* وكانوا قد اشرفوا على العطب  
فقالوا : شأنك \* فخرج اليهم فقالوا : ما انت و اصحابك ؟  
قال : مشركون مستجبرون ليسمعوا كلام الله و يعرفوا حدوده \*  
فقالوا : قد اجزناكم \* قال : فعلمونا \* فجعلوا يعلمونه احكامهم و  
جعل يقول : قد قبلت انا و من معى \* قالوا : فامضوا مصاحبين

فانكم اخواننا \* قال : ليس ذلك لكم قال الله تعالى : ( وان  
 احد من المشركين استعاضك فاجره حتى يسمع كلام الله ثم ابلغه  
 مأمنه ) فابلغونا مأمنا \* فنظر بعضهم الى بعض ثم قالوا :  
 ذلك لكم \* فساروا باجمعهم حتى يلغوم المؤمن \*

2. Translate into Arabic :—

30

They asked 'Ubaidullāh ibn al-Hasan : 'Do you allow the testimony of an abstemious, pious, but foolish man?' He said : 'No; and I shall show you why; call Abū Maudūd, my door-keeper.' When he came, he said to him : 'Go out and look what the wind is.' When he came back, he said : 'A north wind, mixed with a little of the south wind.' So he said : 'Do you think I could allow the testimony of one like this?'

## PERSIAN—HONOURS

### FIRST PAPER

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		AGA MD. KAZIM SHIRAZI. MAULVI FIDA ALI KHAN, M.A. SIR Z. R. ZAHID SUHRAWARDY, KT., BARRISTER-AT-LAW.
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*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English, adding explanatory notes where necessary :— 15

سکرم هاتف میخانه بدولت خواهی  
 گفت باز آئی که دیرینه این درگاهی  
 همچو جم جره می کش که ز سر ملکوت  
 پرتو جام جهان بین دهدت آگاهی

بر در میکرده زندان قلندر باشند  
 که ستانند و دهند افسر شاهنشاهی  
 خشت زیر سر و بر تارک هفت اختراپی  
 دست قدرت نگر و منصب صاحب جاهی  
 سر ما و در میخانه نه طرف بامش  
 بفلک بر شده دیوار بدین کوتاهی  
 با گدایان در میکرده ای سالک راه  
 با ادب باش گر از سر خدا آگاهی

2. Explain fully the following lines :—

20

(a)

ما بصد خرمن پندار ز ره چون نه رریم  
 چون ره آدم بیدار بیک دایم زدند  
 جنگ هفتاد و در ملت همرا عذر بنه  
 چون ندیدند حقیقت در افسانه زدند  
 آتش آن نیست نه بر شعله او خندد شمع  
 آتش آنست که در خرمن پرورانه زدند

(b)

مدتی باین مثنوی تاخیر شد  
 مهلتی بایست تا خون شیر شد  
 تا نه زاید بخت تو فرزند نو  
 خون نکرد شیر شیرین خوش شذر  
 چون ضیاء الحق حسام الدین عفا  
 باز گردانید ز ارج آسمان  
 چون بمعراج حقائق رفته بود  
 بی بهارش غنچه‌ها نشکفته بود  
 چون ز دریا سری ساحل باز گشت  
 چنگ شعر مثنوی با ساز گشت

3. Answer any two of the following :—

25

(a) Write a short dissertation on Qānī as a writer of qasidās.

(b) Give a short biographical sketch of Rūmī's life together with an appreciation of his great work, the *Mathnavī*.

(c) Reproduce the details of the doctrines of Mānī as adduced by Firdausī in his *Shāhnāma*.

4. (a) Write short historical notes on any three of the following :— 8

اردشیر بابکان - شاپور - درالاداب - ابراهیم ادغم - حسن بصری

(b) Write philological notes on the following :— 5

پاسخ - مرید - دستور - درهنگ - چوگان

(c) Pick out the idioms from the following lines and explain their use by illustrative examples :— 9

بگرفت همچو لاله دلم در هوای سرد - دل می رود ز دستم  
صاحب دلال خدا را - ای برمه کشی از عنبر سارا چوگان - تا ز رصف  
رخ زیبای تو ما دم زده ایم - شکر شکن شوند همه طوطیان هـ

5. (a) Re-write the following lines in modern Persian :— 6

(i)

اگر شاه با داد و فرخ پی است  
خرد بی گمان پاسبان رست

(ii)

مهران و کهان پاد برخواستند  
زبانها بخوبی بیاراستند

(iii)

ز بس ناله بوق و هزادی درای  
سپهر اندر آمد تو گفتی ز جای

(b) Explain the idea contained in one of the following lines :— 12

(i)

آشیش در کیننی تفسیر این در حرف است  
با دوستان مرود با دشمنان مدارا

(ii)

دهقان سالخورده چه خوش گفت با پسر  
کلی نور چشم من بجز از کشته ندردی

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English:—

12

گریند زنی از نشاپور به تظلم به غزنین رفت - و پیش محمود گله کرد - و گفت - عامل نشاپور ضیاعی از من بسته است و در تصرف خویش آورده - نامه دادند که این زن را ضیاع ری باز ده - این عامل مگر آن ضیاع را حجتی داشت - گفت - این ضیاع او نیست - حالش بدرگاه باز نمایم - بار دیگر این زن بتظلم رفت - غلامی فرستادند - و عامل را از نشاپور بغزنین بردند - چون بدرگاه سلطان رسید - بفرمود که او را هزار چوب بر در سرای بزنند - عامل حجت عرض می کرد - و پانصد شفیع می آورد - و آن هزار چوب با هزاردینار می خرید - هیچ فئده نداشت - تا هزار چوب بخورد - گفتند - اگرچه این ضیاع ترا درست است چرا بر حکم فرمان نرفتی - و بعد از آن حال باز نمودی - تا آنچه واجب بودی بفرمودندی - و این از بهر آن کردند تا چون دیگران این حال بشنوند کس را زهره تعارض و تمرد و تعدی فرمان نبود \*

2. With reference to the extract in Question 1, answer any four of the following:— 16

(a) Point out the subject to the verbs underlined.

(b) Write etymological notes on—

فرمان - سلطان - درگاه - نشاپور

(c) What is the difference in meaning between ظلم and تظلم and what makes the difference, both being derived from the same root?

(d) Is ضیاع singular or plural? In the latter, how would you justify the suffixing of یایی وحدت to it? Give the opposite number.

(e) In what sense are the words غلام عامل نصر and زهره used here? Give the original import of each.

(f) How would you account for the prolongation of the فتم of پا in پانصد into الف in پانصد? Give at least three examples of the change that you may know of



3. Explain in Persian any two of the following :—

(a) طرارت خرمی بهارستان نطق و بیان و تازه روئی گلستان  
کام و زبان از یمن برکت و سعادت و اهتزاز نسایم اظهار حمد و ثنای  
ذات واجب الوجودی است که چمن آرای عرصه صنع جمیلش  
بلند و پست قطعات طبقات بساطین ارض و سما را در سواد عرصه  
امکان طرح فرمود \*

(b) شریفترین مقاله که آب و رنگ قطرات دلپذیرش را دبیران  
دیوان اطاعت ربانی زینت عنوان صحایف نطق و بیان گردانند -  
و لطیفترین نکته که دیبچه طرازان مجموعه بندگی عبارات حقیقت  
آیاتش را طغرای غرا حق شناسی و ایمان دانند - مغایره لازم  
الاعزاز نعت سرور عالم است \*

(c) طغرا نویسان امثله اخبار لطیفه توفیع این نکته را در عنوان  
طومار تقریر چنین نگارش داده اند - که در ایام استیلای تسلط حجاج  
که تنور ظلمش از خاشاک بیرحمی و شقارت برمی افروخت -  
و از آفت سموم جانگداز شرارت ذات نامسعودش خشک و تر مرزعه  
حیات عام و خاص میسوخت \*

4. Give the substance of the last حکایت in the part of شمسه 6.  
شبهه included in your Pass Course.

5. Translate into English :—

غرض از خرامیدن در چهار باغ این لمیقه آنست که شرم  
و ادب نردبان بام کج رفعت و درجات است - و از راه ادب بمنزل  
همه عطیات توان رسید - و از گلبن شرم ریاحین جمله مدعیات  
توان چید - محققان رموز ابرار و مدققان معانی اسرار که واقفان  
حذاقت آئین نسخه دانش و بینش اند گفته اند - که بر هر فردی  
از افراد انسانی که بعزم دروس رساله آدمیت قدم در مدارس  
فیه رزمندی میگذارد - واجب و لازم است که اولاً در کسب سبق  
قواعد شرم و ادب - ببادرت نماید - تا از ارشاد معلم بغت ارجمند  
هادراک علوم قانون زندگانی کامل عیار و منتهی گردد - که

فی الواقع فرق انسانیت را ادب تاجدست برارزنده و اللیل آدمیت  
را گهریست گران بها و ارزنده \*

6. Why is the art of versification called **عرض** ? Why is this  
name given also to the last foot of the first hemistich of a **بیت** ?  
Give the names of the remaining feet of a **بیت** .

7. Scan any one of the following, naming the **بحر** and **زحاف** 8  
in full :—

(a)

عرفی اگر بگدیه میسر شدی وصال  
صد سال میتوان به تمنا گریستن

(b)

هر سوخته جانی که به کشمیر در آید  
گر مرغ کبابست که با بال و پر آید

(c)

نخسین باده گاندر جام کردند  
ز چشم مسکن ساقی رام کردند

8. Re-write the following in your own Persian without omitting  
anything or changing the sense in any way :— 20

ای دیوجان - در مرکز فضای قدمت مصر، رهیت خود  
پرتوی متحرکی ابر مانند آفریدم - که از شدت حرکت به امر من  
گاهی جزوی از خود متجزا نموده به فضا می افکند - همان  
متجزا نیز متحرک می شد - کریت میگرفت - تا فضای وسیع  
از کرات متحرکه پرگردید - از حرکت کلیه آنها قره بزم روح الارواح  
تولید نمودم که خلل و فرج کائنات و فضا محلا نماید - و رابطه  
جذب و دفع آنها را که بهم بخورند و از هم در نروند و از مدار خود  
منحرف نشوند اسباب استقامت و اعتدال باشد - از حرکت روح  
الارواح تولید شود و حرارت نمودم - و آنها را به تربیت کائنات مامور  
فرمودم - ترتیب تربیت را به مراکز بی شمار تقسیم داشتم - اسم  
مرکز را شمس و مرکز اول را شمس الشموس نام نهادم \*

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

(a) تحصیل یقین بمطالب حقیقت که حکمت عبارت از آنست یا بنظر و استدلال حاصل میشود چنانچه طریق اهل نظر است و ایشان را حکما و علما می خوانند یا بطریق تصفیه و استکمال چنانچه شیوه اهل فقر است و ایشانرا عرفا و اولیا می نامند و اگرچه هر دو طایفه بحقیقت حکما اند لکن طایفه ثانیه چون بمحض موهب ربانی فائز بدرجه کمال شده اند اشرف و اعلی باشند و برزانت انبیا اقرب و اولی خواهند بود \*

10

(b) اول لشکریکه اعراب بطرف ایران کشیدند در عهد عمر بود و ابو عبیده سرداری لشکر داشت سپاه اسلام در آن وقت باید کم باشد بعلت اینکه از طرف مخالف در فوج بود که هر فوج عبارت از در هزار نفر باشد امارت یکی از آن فوج به جیان و فوج دیگر برستم فرخ محول بود پس از آن فوجی دیگر بسرداری جالبانوس بسپاه ایران پیوست حربی عظیم در ساحل شرقی فرات واقع شد گویند ابو عبیده فیلی سفید در مرکز لشکر دیده دانست که ایرانیان را بآن اعتماد است با عزمی ثابت و جاشی رابط روی بدان جانور نهاد و با یک ضرب شمشیر خرطوم او را قطع نمود از فرط درد دیوانه وار بر روی تاخت و سرآپای او را با یک ضرب دست با خاک یکسان ساخت و ازین سبب دهشت بر عربان راه یافته پشت بدادند جمعی عرضۀ تیغ بلا و اکثری غرقۀ موج فنا کردیدند زیرا که پلی که در وقت آمدن بر فرات بسته بودند شکسته شده بقیة السیف به ثعلبه که

15

جائی است در ساحل غربی فرات رفته عمر را از راقعه  
متعذر ساختند \*

(e)

25

آن روح را که عشق حقیقی شعار نیست  
نابود به که بودن او غیر عار ندست  
در عشق مست باش که عشقست هرچه هست  
بی کار و بار عشق بر یار بار نیست  
گویند عشق چیست بگو ترک اختیار  
هر کار ز اختیار نرست اختیار نیست  
عشق شهنشهیست در عالم بر او نثار  
هیچ التفات شاه بوی نثار نیست  
عشق است و عاشق است که باقیست تا ابد  
دل جز برین منه که بجز مستعار نیست  
تاکی نثار گیری معشوق مرده را  
جان را کنار گیر که او را کنار نیست  
آن کز بهار زاد بمیبرد که خزان  
گلزار عشق مدد از نوبهار نیست  
آن گل که از بهار بود خار یار ارست  
و آن می که از عصیر بود بی خمار نیست  
نظاره گر مباش درین راه منتظر  
والله که هیچ مرگ بتر ز انتظار نیست  
بر نقد قلب زن تو اگر قلب نیستی  
این نکته گوش دار گرت گوشوار نیست  
اندیشه ها را کن و دل ساده شو تمام  
چون روی آئینه که بنقش و نگار نیست  
چون ساده شد ز نقش همه نقشها دروست  
و آن ساده روی روی کسی شرمسار نیست

## 2. Translate into Persian :—

80

The justice of his diwān was accessible to the meanest suppliant against himself and his ministers; and it was only for a kingdom that Salahu'd-Din would deviate from the rule of equity. While the descendants of Saljuk and Zangi held his stirrup and smoothed his garments, he was affable and patient with the meanest of his servants. So boundless was his liberality that he distributed twelve thousand horses at the siege of Acre, and at the time of his death, no more than forty-seven drams of silver, and one piece of gold coin, were found in the treasury; yet in a martial reign the tributes were diminished, and the wealthy citizens enjoyed, without fear or danger, the fruits of their industry. Egypt, Syria, and Arabia were adorned by the royal foundations of hospitals, colleges, and mosques; and Cairo was fortified with a wall and citadel, but his works were consecrated to the public cause; nor did the Sultan indulge himself in garden or palace of private luxury. In a fanatic age, himself a fanatic, the genuine virtues of Salahu'd-Din commanded the esteem of Christians; the emperor of Germany gloried in his friendship; the Greek emperor solicited his alliance; and the conquest of Jerusalem diffused and perhaps magnified his fame both in the East and in the West.

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

## 1. Translate into English, adding notes where necessary :—

12

کعبه دارم مقتدائی سبز پوشان فلک  
 کز رطای عیسی آمد شقه دیبای من  
 چون کل رعناست شخصم گری کشتن برند  
 در شهیدی شاهدی دارد گل برنای من  
 آبوسم در بن دریا نشینم چون صدف  
 خس نه ام تابر سر آبم کف بود همتای من  
 جانفشانم عقل باشم فیضرانم دل دهم  
 طبع عامل کیست تا گردد عمل فرمای من  
 علوی و روحانی و غیبی و قدسی زاده ام  
 کی بود در بند استقصات استقصای من  
 دزد گرسو چون خلیل الله درو گر زاده ام  
 بود خواهرگیر عیسی مادر ترسای من

2. Expand the idea contained in the following :—

8

آنکه غم جهان خورد کی خورد از حیات بر

پس تو غم جهان مغور تا ز حیات بر خوری

3. Sketch briefly the life of the author of *Gulshan-i-Raz*.

8

4. Explain fully either of the two following passages :—

12

A

ترا از آتش دروخ چه باکست

که از هستی تن ر جان تو پاکست

ز آتش زر خالص بر فرورد

چو غیثی نبود اندر ری چه سوزد

ترا غیر از تو چیزى نیست در پیش

ر لیکن از وجود خود بیندیش

اگر در خویشتن گردی گرفتار

حجاب تو شود عالم بیکبار

B

قدیم ر معدث از هم خود جدا نیست

که از هستیست باقى دائما نیست

همه آنست ر این مانند عنقااست

جز از حق جمله اسم بی مسماست

عدم موجود گردد این معالست

وجود از روی هستی لا یزال ست

از آن این گردد ر نه این شود آن

همه اشکال گردد بر تو آسان

5. Write notes on any five of the following :—

10

طامة الکبری - تبلى السرائر - عارف - قرۃ عین - عقبی -

اسرار پنهان - رادی ایمن

6. Translate into English :—

10

چو روح از تن بکلیت جدا شد

زمینت قلم صفصف لا تری شد

بدان منوال باشد کار عالم  
 که تو در خویش می بینی در آن دم  
 بقا حقست و باقی جمله فانیتست  
 ببانش جمله در سبع المئانیست  
 چو کل من علیها فان بیان کرد  
 لقی خاق جدید هم عیان کرد  
 بود ایجاد و اعدام در عالم  
 چو خلق و بعث نفس ابن آدم

7. Explain the following fully in Persian :—

10

ای آئینه پذیر مشو آئینه پرست  
 زنج دلم مخواه ز منه دل بر آئینه  
 قبله مساز ز آئینه هر چند مر ترا  
 صورت هر آئینه بنماید هر آئینه

8. Give the substance of the following :—

10

تخم که اینجا فگنی کشت تو آنجا دروند  
 جوئی امروز کنی آب تو فردا بینند  
 بد دلی درره نیکی چه کنی کاهل نیاز  
 نیک را هم نظر نیک مکافا بینند  
 تشنگانی که ز خون سیر شوند از می عشق  
 دل دربا کش سرمست چو دریا بینند

9. Translate into Persian :—

20

The Prince Tahmāsp had two sons, Ibrāhīm 'Adil Shāh and the Prince Ismā'il. The latter was brought up with his brother till he arrived at the age of puberty, when Dilāwār Khan sent him to be kept prisoner in the fortress of Belgam, according to the usual policy of Governments. After the expulsion of the Regent, Ibrāhīm 'Adil Shah sent one of his confidential servants to his brother, to express his concern that reasons of state policy did not permit him to satisfy the desire he had that they should live in the same place together.

## FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

10

سمع قوتیست گسترده کرده در عصب متفرق که در سطح صماخ است تا دریابد آن صوتی را که متادی شود و از تمرچ هوالیکه افشوده شده باشد میان متقارعین اعنی در جسم درهم گرفته شده که از کوفتن ایشان هوا موج زند و علت آراز گردد تا تادیه کند هوالیکه ایستاده است اندر تجویف صماخ و مماس آن شود و بدان عصب پیوند و بشنود \*

2. Answer any two of the following :—

20

(a) Re-write the story about Firdausi, in your own Persian, following closely the account given in the *Chahār Maqāla*.

(b) Sketch briefly in Persian, the life of the author of *Akhlaq-i-Jalali*.

(c) Justify :—

بسا کاخا که محمودش بنا کرد  
که از رفعت همی با مه ندا کرد  
نبینی زان همه یکخشت بر پای  
مدیم عنصری مانده ست بر جای

3. Give a critical estimate of the literary career of Abu'l Fazl. 10

4. Answer either GROUP A or GROUP B

## GROUP A

(a) Translate into English :—

10

فلما بعث موسى نبينا و عليه السلام اصلم بين بنى الجان و بنى اسرائيل بالدين و الشريعة و دخل كثير من الجن فى دين موسى فلما كن ايام سليمان بن داود عليهما السلام و شيد الله ملكه و سخر له الجن و الشياطين و غلب سليمان على ملك الارض فتخرت الجن على الانس بان ذالك من معارضة الجن لسليمان عليه السلام \*



(b) Explain in Persian :—

10

ان الذين يباعدونك إنما يباعدون الله يد الله فرق ايديهم  
فمن نكمت فانما ينفك على نفسه \*

(c) Write notes on the following :—

10

شجرة طوبى - منافقين - ابو جهل - بحر الحقائق - اخوان الصفا

(d) Translate into Arabic :—

80

(i) My brother is at home. (ii) He will come back after a month. (iii) Will you give me this book? (iv) Where do you live? (v) Work while you work and play while you play.

## GROUP B

Write an essay in Persian on one of the following subjects :—

60

- (a) Poets of the Ghaznavid period.
- (b) Nasir Khusrau 'Alavi.
- (c) The best Persian qasida-writer in your opinion.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The questions are of equal value*

## MUSLIM HISTORY

*Answer any THREE of the following*

1. Describe briefly the conquest of Persia by the Saracens.
2. Give an account of Akbar as a soldier, an administrator, and a nation-builder.
3. What was the social and political condition of Arabia just before the advent of Muhammad
4. Give a brief survey of the reign of Sultan Mahmūd Ghaznavī and literary activities during his reign.
5. Give a brief account of the rise and fall of the Qājār dynasty, noticing the most important events during that period.

## HISTORY OF PERSIAN LITERATURE

*Answer any THREE of the following*

1. Compare and contrast Hāfiz and Sa'di as ghazal writers.
2. Enumerate the principal forms of Persian poetry. Name the famous writers in each and the period during which they flourished.
3. Give a biographical sketch of :—

بابا طاهر - ناصر خسرو - نصير الدين طوسي - محمود شبستري

4. What encouragement did Persian literature receive from the Mughal rulers?

5. What was the condition of Persian literature during the early days of the Saljūq period? What part did Nizāmu'l-Mulk play in its development?

### RHETORIC AND PROSODY

1. Define and illustrate any four of the following :—

تجنیس مضارع - ادماج - ایهام - حسن تعلیل - مراعات النظر -  
تنسيق الصفات - خیفا -

2. Indicate and explain the rhetorical figures in the following :—

(a)

مرغ دل را صید جمعیت بدام افتاده بود  
زلف بکشدی ر باز از دست شد نخچیر ما

(b)

کشیده قامتی چون سر سیمین  
دو زنگی بر سر نخلش رطب چین

(c)

ماه کنعانی من مسند مصر آن تو شد  
گاه آنست که پدرود کنی زندان را

3. Scan the following bait and any two baits in Question 2.

ای نگارین روی دلبر زان مائی  
رخ مکن پنهان چو اندر جان مائی

## PERSIAN—PASS

## FIRST PAPER

Examiners— { SIR ABDULLA SUHRAWARDY, Kt., M.A., D.Litt.,  
Ph.D.  
MAULVI SYED MUZAFFARUDDIN AHMAD, M.A.,  
M.L.A.  
MAULVI M. MAHFUZUL HUQ, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

25

(a)

بگردن تیره ابری بامدادان بر شد از دریا  
جواهر خیز گوهر ریز و گوهر بیز و گوهر را  
چو چشم اهرمن خیره چو رزی رنگیان تیره  
شده گفتی همی چیره بمغزش علت سودا  
سیه گون چون شب غاسق گرفته چون دل عاشق  
باشک دیده رامق برونک طره عذرا  
تنش با قیر آلوده دلش از شیر آموده  
برون پر سرمه سوده درون پر لؤلؤ  
بدل گلشن بتن زندان گهی گریان گهی خندان  
چو در بزم طرب زندان ز شور نشئه صبا

(b)

در ازل پرتو حسنت ز تجلی دم زد  
عشق پیدا شد و آتش به همه عالم زد  
جلوه کرد رخت دید ملک عشق نداشت  
عین آتش شد ازین غیرت و بر آدم زد  
عقل می خواست کزان شعله چراغ افروزد  
برق غیرت بدرخشید و جهان برهم زد  
مدعی خواست که آید به تماشا که راز  
دست غیب آمد و در سینۀ نامعرم زد

دیگران قرعه قسمت همه بر عیش زدند  
 دل غم دیده ما بود که هم بر غم زد  
 جان علوی هوس چاه زنخدان تو داشت  
 دست در حلقه آن زلف خم اندر خم زد  
 نظری کرد که بیند بجهان صورت خویش  
 خیمه در آب و گل مزرعه آدم زد  
 حافظ آن روز طربنامه عشق تو نوشت  
 که قلم بر سر اسباب دل خرم زد

2. Explain the philosophical ideas underlying any three of the following extracts :— 18

(a)

درین چمن گل بی خار کس نه چید آری  
 چراغ مصطفوی با شرار بولهبیست

(b)

مطلع شمس آ اگر اسکندری  
 بعد از آن هر جا روی نیکو فری  
 بعد از آن هر جا روی مشرق شود  
 شرقها بر مغربت عاشق شود

(c)

کی شود گلزار و گندم زار این  
 تا نگردد زشت و زیران این زمین  
 کی شود بستان و کشت و برگ و بر  
 تا نگردد نظم او زیر و زیر

(d)

آسمان بار امانت نه توانست کشید  
 قرعه فال بنام من دیوانه زدند

3. Write short notes on any four of the following :— 8

ام الغبالت - جام جم - طوبی - حاجی قوام - روز الست - قیدافه

4. (a) Give in your own words :— 18

Either, The story of

رفتن شاپور بطریق بازرگانی بروم و گرفتار شدنش بدست قیصر

Or, The substance of Rūmī's discourse on—

نومین بالقدر خیر و شر

(b) Analyse, according to Persian grammar, the first line in extract (c) of Question 2. 5

5. What are the special features of a ghazal? Discuss fully. 12

6. Give the opposite number of any five of the following nouns:— 10

عالم - نظر - ارقام - وصف - سحر - صرمعه - اسرار - شیخ -  
حدیث - مسئله

7. Either, Illustrate the various uses of *یای مجهول* giving examples in each case. 9

Or, Elucidate the idea contained in the following lines:—

ملک آزادگی رکنج قذاعت گنجیست  
که به شمشیر میسرنه شود سلطان را

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English:—

24

A

دیگری گفت من مرد بازارگام - و کار من آنست که بتر  
و خشک سفر میکردم - و اندک سرمایه دارم - و متاعی که بشهری  
بخرم بدیگر شهر برم و بفروشم - و باندکی سود قذاعت کنم - مگر  
عقد مروراید داشتم - چون بدین شهر آمدم در بها کردم - خبر بوزیر  
ملک شد - کس فرستاد و مرا بخواند - و آن رشته مروراید از من  
خریداری کرد - بی آنکه بها بدهد بخزانه خویش فرستاد - چند  
روز بسلام ارهمی رفتم - خود در آن راه نشد که مرا بهای عقد  
مروراید می باید داد و نه عقد باز داد - طاقتم نماند - و بر سر راه  
بودم - روزی پیش روی گفتم - اگر آن عقد شایسته است بفرمای  
تا بها بدهند - و اگر شایسته نیست باز دهند که من بر سر راه ام -

خود جواب من باز نداد - چون برتاقی باز آمدم سرهنگی را دیدم  
با چهار پیاده که در رتاق من آمدند - و گفتند - برخیز که ترا وزیر  
می خواند شاد گشتم - گفتم - بهای مروارید خواهد داد - برخاستم  
و بآن عوانان رفتم - عوانان مرا بردند تا بدر زندان - زندان بانرا  
گفتند - این مرد را بزندان کن و بند گران بپایش بده \*

## B

ساعت بیدار شدن پادشاه گذشت - محرمان خواب گاه از  
پس پرده نگران و منتظر بودند - ولی بی اذن جرات دخول  
نداشتند - ساعت دیگر گذشت - خواجه حرم بملکه خبر داد -  
ملکه تا پیش پرده خوابگاه آمد آواز نمود - قربانت شوم - مانورم  
شرفیاب شوم - کمبیز آواز ملکه را شنید - رنگ از رخسارش پرید -  
بی تامل گفت - تو برز کاری که در دست داری تمام کن - ملکه  
چون قالب بی روح به اطاق خود برگشت - چون صبح زود  
برخاسته خودش سمی تعبیه می نمود که داخل غذای نوشزاد  
بکند - متفکر شد که پادشاه مرا باز ندهد یعنی چه - بمن بگوید  
برو کار خود را تمام کن چرا - پس یقین از کارهای من مخبر شده -  
که خبر داده - سیفون مذاق و خاین نیست - و انگهی از دیروز  
بمضور نیامده از تعبیه سم امروزی من حتی سیفون نیز مطلع  
نیست - اما پادشاه معلوم است همرا میداند - از کجا میداند -  
تصور ملکه مثل برق از یک گوشه خیال بگوشه تصور دیگر میدرد -  
ولی جز شدت نگرانی و رحشت مرگ ناگهانی چیزی حاصل او  
نمی شد \*

2. (a) Write etymological notes on the words underlined in extracts A and B in Question 1 above. 7

(b) In Extract B, Question 1, who are ملکه and نوشزاد? 8

(c) Elucidate the insinuation contained in the words— 8

کاری که در دست داری

(d) What is تطیر? Give the gist of what is said about it in مسالک المصنفین. 4

8. Do you find any internal evidence in the Tablets alleged to have been discovered by کمبیز درم پادشاه ایران which goes against their supposed antiquity? If so, then what is it? 7

4. Explain any two of the following :— 15

(a)

قصر هستی بیجودش بود پست  
از طفیلش هست شد هر چیز هست  
گر وجود از نمی شد واسطه  
تا ابد بودی جهان بی ضابطه  
آن که بوسد آستانش را ملک  
کرده خم قد بهر تعظیمش فلک  
تا نهال هستی داذش نرست  
کاخ ایمان را نشد ارکان درست

(b) چون خطیب منبر نبوت و عندلیب حدیقه فخرت اعنی  
برگزیده ایزد نور الجود و الهم عیسی ابن مریم بصدور صفت برتری  
و تفرق در آمد - و گوهر وجود گرامیش از آب و رنگ کرامت  
و رسالت زیب گرانمایی و رتبه کامل عیاری یافت \*

(c)

کی نطق مرد معرکه و صاف قدر اوست  
بیرون بود صفات وی از مرکز قیاس  
در آستان قدر جلالتش نمیرسد  
گر صد هزار سال پرد طائر قیاس  
سر مشق تازه روزی فردوس راحتست  
هر دل که نقد بندیش کرد اقتباس  
هر چنین او بنامه آزادگی خطی است  
پیشانی که خاک سجودش بود مساس

5. (a) What part of speech is هست in the first couplet of Question 4. (a)? 8

(b) Point out the subject and object of کرده in the second hemistich of the third couplet of Question 4. (a). 8

(c) What is the antecedent of the pronoun in **سجدهش** in the fourth couplet of Question 4. (c), and with what word would the pronoun go in prose? 8

6. How is **خلیل بن احمد** to have discovered the rules of versification or **عروض**? What light does the account of the discovery throw on the question whether metre can or cannot exist independently of words? 10

7. Define and illustrate— 9

**شعر - مصراع - صدر - ضرب - ارکان - اصول**

8. Scan any one of the following and name the metre:— 10

(a)

ای ز رهم غیر غوغا در جهان انداخته  
گفته خود حرفی و خود را در گمان انداخته

(b)

یا رب مرا ثابت قدم از کوی قاتل نگذار  
من سر بجیب انداخته از تیغ عریان در بغل

(c)

الهی شوخی برق تجلی ده زبانم را  
قتول خاطر موسی کلامان کن بیانم را

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English:—

A

من غرق درین خیالات بودم که ناگاه صدائی از سمت در خانه بگوش رسید من از ترس جوابی ندادم - دق الباب مکرر شد و پس از قدری حرکت در خود بخود باز شد و شخصی بخانه فراز آمد و صدای پای خفیفی که بر روی راه بطرف منزل بود حرکت میکرد بگوش ما رسید - اما قدریکه نزدیک آمد معلوم شد این صدای پا از یکنفر نیست بلکه چند نفر هستند که بطرف منزل می آیند تا بدر اطاق رسیده آهسته در را کوپیدند - من بشوهرم گفتم چه باید



کرد - جواب داد که در را باید کشود و هیچ خوف نکرد زیرا که اینها :  
 اگر دشمن بودند و بقصد اذیت ما می آمدند باین آرامی راه  
 نمیرفتند - خلاصه با قوت قلب برخاسته در را کشودیم - در نفر زن  
 هندو که چادرهای سفید بر سر داشتند بدون سوال و جواب وارد اطاق  
 شده یکی از آن دو بعات هندوان بر زمین نشسته بغچه از بغل  
 در آورده باز کرد و چند چادر سفید بیرون آورده بمن اشاره کرد که  
 برخیزید و این چادرها بر سر کرده از قفلی من بیالید - شوهرم  
 گفت تا کجا بیائیم گفت تا آنجا که محمد فیلبان انتظار شمارا دارد \*

B

20

برگزید ایزد میان انس و جان  
 صاحبان علم را اندر جهان  
 علم یک لطف است از الطاف خدا  
 علم یک رصف است ز اوصاف خدا  
 علم نبود غیر فضل کردگار  
 هر که حاصل کرد شد ذر اقتدار  
 علم باشد غمازه حسن و جمال  
 علم باشد همدمت در کل حال  
 علم آمد رجه اعزاز بشر  
 نیست فرقی در نه در انسان و خر  
 علم دین را هست شان بربری  
 گر بیاموزی بیابی سروری  
 اندرین دنیات باشد عز و شان  
 باز در عقبی ست ماریت جنان  
 دزد نتواند ستانند نقد علم  
 فقد عز و جاه باشد فقد علم  
 علم و فن را مایه کن از جان و دل  
 تا بتابد نور او در آب و گل

گر تو میخواستی که گردی حق شناس

علم را در خاطر خود دار پاس

2. Translate into Persian :—

50

(a) As the Minister was proceeding one day to the Court, a party of the Prince's troops became clamorous for their pay, and blocked up his path. He leapt from his palanquin, and, drawing his sword, ordered his servants to clear the way. The soldiers, seeing his resolution, dispersed. On reaching the palace, the Minister entered the Prince's presence, and accused him of being at the bottom of this conspiracy. The Prince declared that he was innocent, but the Minister would not credit him. On returning to his own house, he drew up an account of this event, and sent it to the Emperor, who wrote sharply to the Prince, and told him he would be held answerable if the person or the property of the Minister was touched.

(b) Jalālu'd-Dīn, having been driven from Khwārazm, retreated towards India, and arrived on the banks of the Attock, where he was overtaken by the forces of Changhiz Khān. In this situation there appeared no alternative but to perish in the waters, or repel the enemy. He chose the latter resource, and gallantly opposed the infidel Tartars, many of whom he slew with his own hand, but at length, his army being broken, he retired with seven hundred horse. He was hotly pursued, and again he defended himself for several hours in the most gallant manner, but was at last compelled to seek safety in flight, his horse being scarcely able to support him. In his retreat, he joined his sons, and, mounting a fresh charger, once more checked the pursuing enemy, but, being overpowered by their superior force, he was seized and taken prisoner.

## FRENCH—HONOURS

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### FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

24

(a) Quel abus de quitter le vrai nom de ses pères,  
Pour en vouloir prendre un bâti sur des chimères !  
De la plupart des gens c'est la démangeaison ;  
Et, sans vous embrasser dans la comparaison,

Je sais un paysan qu'on appelait Gros-Pierre,  
 Qui, n'ayant pour tout bien qu'un seul quartier de terre,  
 Y fit tout à l'entour faire un fossé bourbeux,  
 Et de monsieur de l'Ile en prit le nom pompeux.

Or,

Avec quelle imprudence et quelle hâte extrême  
 Il m'est venu conter cette affaire à moi-même !  
 Bien que mon autre nom le tienne dans l'erreur,  
 Etourdi montra-t-il jamais tant de fureur ?  
 Mais, ayant tant souffert, je devais me contraindre,  
 Jusques à m'éclaircir de ce que je dois craindre,  
 A pousser jusqu'au bout son caquet indiscret,  
 Et savoir pleinement leur commerce secret.

- (b) Des flammes de tes yeux inonde ma paupière,  
 Chante-moi quelque chant comme parlois le soir  
 Tu m'en chantaïs, avec des pleurs dans ton œil noir.  
 Soyons heureux ! buvons, car la coupe est remplie,  
 Car cette heure est à nous, et le reste est folie.  
 Parle-moi, ravis-moi. N'est-ce pas qu'il est doux  
 D'aimer et de savoir qu'on vous aime à genoux ?  
 D'être deux ? d'être seuls ? et que c'est douce chose  
 De se parler d'amour la nuit quand tout repose ?  
 Oh ! laisse-moi dormir et rêver sur ton sein.

Or,

Tu me crois peut-être  
 Une homme comme sont tous les autres, un être  
 Intelligent, qui court droit au but qu'il rêva.  
 Détrompe-toi. Je suis une force qui va !  
 Agent aveugle et sourd de mystères funèbres !  
 Une âme de malheur faite avec des ténèbres !  
 Où vais-je ? Je ne sais. Mais je me sens poussé  
 D'un souffle impétueux, d'un destin insensé.  
 Je descends, je descends, et jamais ne m'arrête.  
 Si parfois, haletant, j'ose tourner la tête,  
 Une voix me dit : Marche ! et l'abîme est profond,  
 Et de flamme ou de sang je le vois rouge au fond !

2. Translate into English any two of the following extracts :—

30

(a) Cette lettre vous surprendra sans doute, et l'on peut trouver bien hardis pour moi, et le dessein de vous écrire, et la manière de vous la faire tenir ; mais je me vois dans un état à ne plus garder de mesure. La juste horreur d'un mariage dont je suis menacé dans six jours me fait hasarder toutes choses ; et dans la résolution de m'en affranchir par quelque voie que ce soit, j'ai cru que je devais plutôt vous choisir que le désespoir. Ne croyez pas pourtant que vous soyez redevable de tout à ma mauvaise destinée : ce n'est pas la contrainte où je me trouve qui a fait naître les sentiments que j'ai pour vous ; mais c'est elle qui en précipite le témoignage et qui me fait passer sur des formalités où le bienséance du sexe oblige.

- (b) Sa robe, qui traîne, est en satin blanc,  
 Son peigne est d'argent et de pierreries ;  
 La lune se lève au ras des prairies.  
 Partons, joli cœur, je suis ton galant.

Comme un enfant joue avec un oiseau,  
 Elle tient ma vie entre ses mains blanches,  
 La lune se lève au milieu des branches,  
 Partons, joli cœur, et prends ton fusil.

- (c) Avant vous j'étais belle et toujours parfumée,  
J'abandonnais au vent mes cheveux tout entiers,  
Je suivais dans les cieux ma route accoutumée,  
Sur l'axe harmonieux des divins balanciers.  
Après vous, traversant l'espace où tout s'éclaire,  
J'irai seule et sereine, en un chaste silence;  
Je fendrai l'air du front et de mes seins altiers.

3. *Either*, Describe Molière's general ideas about the relation between man and wife as revealed in the *Ecole des Femmes*. 18

Or, Describe the *Maximes du Mariage* taught by Arnolphe.

4. Comment on, and frame sentences illustrating the use of—  
(a) *dans un tel accessoire*, (b) *cul de couvent*, (c) *douaire préfix*, (d) *fou fleffé*, (e) *becque cornu*.

5. Comment on the *dénouement* of *Ecole des Femmes* from the point of view of dramatic art. 18

6. Translate into French :—

10

If you find the highest, the fullest, and the richest life that not only this world but that any world can know, then do away with the sense of the separateness of your life from the life of God. Hold to the thought of your oneness. In the degree that you do this you will find yourself realizing it more and more, and as this life of realization is lived you will find that no good thing will be withheld, for all things are included in this. Then it will be yours, without fears or forebodings, simply to do to-day what your hands find to do, and so be ready for to-morrow, when it comes, knowing that to-morrow will bring to-morrow's supplies for the mental, the spiritual, and the physical life. Remember, however, that to-morrow's supplies are not needed until to-morrow comes.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English two of the following extracts :—

24

(a) On croyait le roi si peu rancunier que les premiers qui lui envoyèrent ambassade furent justement ceux dont il avait le plus à se plaindre, les Armagnacs. Eux-mêmes se plaignaient des princes qui, les tenant éloignés de Paris, montraient assez qu'ils voulaient se passer d'eux et leur faire petite part au butin. Après les Armagnacs vint le comte de Saint-Pol, qui avait tout mis en mouvement, mais qui au fond ne voulait qu'une chose, l'épée de connétable; il causa longuement avec le roi, et sans doute en tira parole. Jean de Calabre n'était peut-être pas loin de faire aussi son traité à part, comme lui conseillait son père, et de laisser là les deux tyrans de la ligue, le Bourguignon et le Breton.

(b) Il jugea pourtant avec sagacité que les Anglais ayant si peu à se louer du duc de Bourgogne et du connétable, n'ayant été reçus nulle part encore et n'ayant en France que la place de leur camp,

ils ne seraient pas si terribles. Cette France dévastée ne leur semblait guère désirable. Le roi avait fait un désert devant eux. D'autre part Edouard avait fait tant de guerres, qu'il en avait assez; il était déjà fatigué et lourd; il devenait gras. Gouverné comme il l'était par sa femme et les parents de sa femme, il y avait un point par où l'on pouvait le prendre aisément, un mariage royal, qui eût tant flatté la reine! demander une de ses filles pour le petit dauphin.

(c) Il y a différents degrés dans cette aversion pour la vérité: mais on peut dire qu'elle est dans tous en quelque degré, parce qu'elle est inséparable de l'amour-propre. C'est cette mauvaise délicatesse qui oblige ceux qui sont dans la nécessité de reprendre les autres, de choisir tant de détours et de tempéraments pour éviter de les choquer. Il faut qu'ils diminuent nos défauts, qu'ils fassent semblant de les excuser, qu'ils y mêlent des louanges, et des témoignages d'affection et d'estime. Avec tout cela, cette médecine ne laisse pas d'être amère à l'amour-propre. Il en prend le moins qu'il peut, et toujours avec dégoût, et souvent même avec un secret dépit contre ceux qui la lui présentent.

2. (a) Trace and explain the chief causes which contributed to the downfall of the duchy of Burgundy. 15

(b) Write a short appreciation of the times of La Rochefoucauld and of the value of his *Maximes*. 15

3. (a) Show, with examples, the various ways of putting a question in French when the subject of the sentence is either (i) a personal pronoun, or (ii) a noun without any interrogative particle, or (iii) a noun introduced by such a particle. 10

(b) Translate the following:—These are not ripe, are they? You play the piano, do you not? Don't you like shrimps? No, I do not. 6

4. Translate into English:— 30

(a) Certain rat de campagne en son modeste gîte,  
De certain rat de ville eut un jour la visite;  
Ils étaient vieux amis; quel plaisir de se voir:  
Le maître du logis veut, selon son pouvoir  
Régaler l'étranger; il vivait de ménage,  
Mais donnait de bon cœur, comme on donne au village.  
Il va chercher, au fond de son garde-manger,  
Du lard qu'il n'avait pas achevé de ronger.  
Des noix, des raisins secs; le citadin à table,  
Mange du bout des dents, trouve tout détestable.  
Pouvez-vous bien, dit-il, végéter tristement  
Dans un trou de campagne, enterré tout vivant?  
Croyez-moi, laissez-là cet ennuyeux asile;  
Venez voir de quel air nous vivons à la ville;  
Hélas! nous ne faisons que passer ici-bas;  
Les rats petits et grands marchent tous au trépas;  
Ils meurent tout entiers et leur philosophie  
Doit être de jouir d'une si courte vie,  
D'y chercher le plaisir. Qui s'en passe est bien fou.

(b) Voici une anecdote qui est à la fois un trait de générosité et un trait de caractère. Marivaux partait un jour pour la campagne avec une dame qui lui avait donné une place dans sa voiture. Pendant que la dame, qui n'était pas encore montée, était occupée à donner quelques ordres, un jeune homme de dix-huit à vingt ans, gras, potelé, du teint le plus frais et le plus vermeil, vint à la portière demander l'aumône. Marivaux frappé du contraste entre la démarche humiliante et l'air de santé du mendiant: 'N'as-tu pas honte, misérable, lui dit-il,

jeune comme tu es, et te portant le mieux du monde, de demander un pain que tu pourrais gagner par un honnête travail?' Le jeune homme, consterné de ce propos, lui répondit en sanglotant: 'Ah! monsieur, si vous saviez, je suis si paresseux!' Marivaux le regarde en souriant, tire un écu de sa poche et le lui donne.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer the questions marked with an asterisk (\*) and any two others*

*The figures in the margin indicate full marks*

\*1. Translate into French two of the following passages:—

50

(a) 'I was a young man at the time,' said the narrator, drawing at his pipe and glancing good-humouredly at the company. 'I had just come back from China, and my own people being away, I went down into the country to invite myself to stay with an uncle. When I got down to the place, I found it closed and the family in the South of France; but as they were due back in a couple of days, I decided to put up at the Royal George, a very decent inn, and await their return. The first day I passed well enough, but in the evening the dullness of the rambling old place, in which I was the only visitor, began to weigh upon my spirits, and the next morning, after a late breakfast, I set out with the intention of having a brisk day's walk.

(b) Charlemagne was scarcely interred, when the imbecility and the disputes of his descendants began to bring contempt on themselves and destruction on their subjects. The wide dominion of the Franks was severed into a thousand pieces. Nothing more than a nominal dignity was left to the abject heirs of an illustrious name. Fierco invaders, differing from each other in race, language, and religion, flocked, as if by concert, from the farthest corners of the earth, to plunder provinces which the government could no longer defend. In the midst of these sufferings, a great internal change passed over the empire. The corruption of death began to ferment into new forms of life. Just here, in the most barren and dreary tract of European history, all feudal privileges, all modern nobility take their source.

(c) It happened one day, about noon, going towards my boat, I was exceedingly surprised by the print of a man's naked foot on the shore, which was very plain to be seen on the sand. I stood like one thunderstruck, or as if I had seen an apparition. I listened, I looked round me, but I could hear nothing, nor see anything; I went up to a rising ground, to look farther; I went up the shore, and down the shore; but it was all one: I could see no other impression but that one, I went to it again, to see if there were any more, and to observe if it might not be my fancy; but there was no room for that, for there was exactly the print of a foot—toes, heel, and every part of a foot. How it came thither, I knew not, nor could I in the least imagine.

\*2. How does the possessive adjective agree in French?

10

Translate:—a friend of mine; a book of hers; a countryman of yours.

3. What is the use in French of the *mode conditionnel*? 16
- \*4. Translate the following idioms :— 10
- (a) Serve him right !  
 (b) You may depend upon it.  
 (c) How long have you been in Calcutta?  
 (d) The curtain (of the stage) drops.  
 (e) To beat the time.
5. What do you know of the plural of substantives and adjectives ending in -al? Give examples. 10
6. Give an idea of the reign of the saintly king Louis IX. 10
7. Summarize the rivalry between Francis I of France and the Emperor Charles V. 10
- \*8. What causes brought about the downfall of Napoleon I? 10

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—
- (a) *Either,*
- Mais une femme habile est bien une autre bête,  
 Notre sort ne dépend que de sa seule tête,  
 De ce qu'elle s'y met rien ne la fait gauchir  
 Et nos enseignements ne font là que blanchir;  
 Son bel esprit lui sert à railler nos maximes,  
 A se faire souvent des vertus de ses crimes.  
 Et trouver, pour venir à ses coupables fins,  
 Des détours à duper l'adresse des plus fins.
- Or,*
- Il le faut avouer, l'amour est un grand maître :  
 Ce qu'on ne fut jamais, il nous enseigne à l'être,  
 Et souvent de nos mœurs l'absolu changement  
 Devient par ses leçons l'ouvrage d'un moment.  
 De la nature en nous il force les obstacles,  
 Et ses effets soudains ont de l'air des miracles.  
 D'un avare à l'instant il fait un libéral,  
 Un vaillant d'un poltron, un civil d'un brutal;  
 Il rend agile à tout l'âme la plus pesante  
 Et donne de l'esprit à la plus innocente.
- (b) *Either,*
- Ah ! puisque Dieu, pour qui tout obstacle s'efface,  
 Prend nos deux majestés et les met face à face,  
 Verse-moi dans le cœur, du fond de ce tombeau,  
 Quelque chose de grand, de sublime et de beau !  
 Oh ! par tous ses côtés fais-moi voir toute chose.  
 Montre-moi que le monde est petit, car je n'ose  
 Y toucher. Montre-moi que sur cette Babel  
 Qui du pâtre à César va montant jusqu'au ciel,  
 Chacun en son degré se complaît et s'admire,  
 Voit l'autre par-dessous et se retient d'en rire.

## Or

Tout s'est éteint, flambeaux et musique de fête.  
 Rien que la nuit et nous. Félicité parfaite!  
 Dis, ne le crois-tu pas? sur nous, tout en dormant,  
 La nature à demi veille amoureuxsement.  
 Pas un nuage au ciel. Tout, comme nous, repose.  
 Viens, respire avec moi l'air embaumé de rose!  
 Regarde. Plus de feux, plus de bruit. Tout se tait.  
 La lune tout à l'heure à l'horizon montait;  
 Tandis que tu parlais, sa lumière qui tremble  
 Et ta voix, toutes deux m'allaient au cœur ensemble.

2. Translate into English any *two* of the following passages :— 30

- (a) O laurier, qui verdiss dans les jardins célestes,  
 Que l'aube ambrosienne arrose de ses pleurs!  
 Laurier, désir illustre, oublis jours funestes,  
 Qui d'un songe immortel sait charmer nos douleurs!  
 Permets, que, par mes mains pieuses, ô bel arbre,  
 Ton feuillage mystique effleure le parvis,  
 Afin que la blancheur vénérable du marbre  
 Eblouisse les yeux raviss!
- (b) Ces Mores mécréants, ces maudits Sarrasins  
 Buvaient l'eau de nos puits et mangeaient nos raisins  
 Et nos figues, et nos grenades,  
 Suivaient dans les vallons les vierges à l'œil noir  
 Et leur parlaient d'amour, à la lune, le soir,  
 Et leur faisaient des sérénades.

(c) Wellington, c'est la guerre classique qui prend sa revanche. Bonaparte, à son aurore, l'avait rencontré en Italie, et superbement battu. La vieille chouette avait fui devant le jeune vautour. L'ancienne tactique avait été non seulement foudroyée, mais scandalisée. Qu'était-ce que ce corse de vingt-six ans, que signifiait cet ignorant splendide qui, ayant tout contre lui, rien pour lui, sans vivres, sans munitions, sans canons, sans souliers, presque sans armée, avec une poignée d'hommes contre des masses, se ruait sur l'Europe coalisée, et gagnait absurdement des victoires dans l'impossible? L'école académique militaire l'excommuniait en lâchant pied. Le 18 juin 1815 cette rancune eut le dernier mot, et au-dessous de Lodi, de Montebello, de Montenotte, de Mantoue, de Marengo, d'Arcole elle écrivait : Waterloo Triomphe des médiocres, doux aux majorités. Le destin consentit à cette ironie.

3. Criticize the *dénouement* of *Hernani* from the point of view of dramatic art. 18

4. Comment on the character of *Hernani* as a romantic hero. 18

5. (a) Describe the exact significance of the French subjunctive, giving examples. 10

(b) Give an example of the use of *pas* without *ne* in the negative sense, and an example of the use of *ne* without *pas* in the affirmative sense.

(c) Frame sentences illustrating the use of—*à moins que, plus que, se faire, s'y tenir, s'en vouloir*.

6. Translate into French :— 10

The bodies of thousands to-day would be much better cared for if their owners gave them less thought and attention. As a rule those who think least of their bodies enjoy the best health. Many are kept in continual ill health by the abnormal thought and attention they give them. Give the body the nourishment, the exercise, the



fresh air, the sunlight it requires, keep it clean, and then think of it as little as possible. Don't talk of sickness and disease. Talk of those things that will make people the better for listening to you. Thus you will infect them with health and strength, and not with meanness and disease.

### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate two of the following extracts :—

20

(a) On se croit naturellement bien plus capable d'arriver au centre des choses que d'embrasser leur circonférence. L'étendue visible du monde nous surpasse visiblement; mais comme c'est nous qui surpassons les petites choses, nous nous croyons plus capables de les posséder; et cependant il ne faut pas moins de capacité pour aller jusqu'au néant que jusqu'au tout. Il la faut infinie pour l'un et l'autre; et il semble que qui aurait compris les derniers principes des choses pourrait aussi arriver jusqu'à connaître l'infini. L'un dépend de l'autre, et l'un conduit à l'autre. Les extrémités se touchent et se réunissent à force de s'être éloignées, et se retrouvent en Dieu, et en Dieu seulement.

(b) L'esprit de ce souverain juge du monde n'est pas si indépendant qu'il ne soit sujet à être troublé par le premier tintamarre qui se fait autour de lui. Il ne faut pas le bruit d'un canon pour empêcher ses pensées: il ne faut que le bruit d'une girouette ou d'une poulie. Ne vous étonnez pas s'il ne raisonne pas bien à présent; une mouche bourdonne à ses oreilles: c'en est assez pour le rendre incapable de bon conseil. Si vous voulez qu'il puisse trouver la vérité, chassez cet animal qui tient sa raison en échec, et trouble cette puissante intelligence qui gouverne les villes et les royaumes. Le plaisant dieu que voilà!

(c) La ville n'en était pas moins mécontente, agitée: les Normands que le roi avait mis dans Paris, pourraient-ils bien jusqu'au bout contenir leurs mains normandes? On craignait le pillage. Une nuit, les rues s'illuminent, partout des feux; les bourgeois s'arment et courent à leurs bannières. Qui a donné l'ordre, personne ne peut le dire. Le roi mande 'sire Jehan Juillier clerc de la ville,' lequel dit froidement et sans rien excuser, que tout cela se fait de bonne intention. Le roi fait dire, de rue en rue, qu'on éteigne et qu'on aille se coucher; personne n'obéit, tout reste armé. Une batterie n'était pas improbable entre les bourgeois et les troupes.

2. (a) Compare the works of Pascal, La Rochefoucauld, and Vauvenargues (i) from the point of view of French literature, (ii) from the point of view of Ethics and Philosophy. 18

(b) Describe briefly the struggle between Charles the Bold and the Swiss, the causes which brought it about, its various events, and its final result. 14

(c) Write short notes on four of the following :—Comines, les élus, droit d'aubaine, ban et arrière-ban, Dunois, Dammartin, les Armagnacs. 8

## 3. Translate into French :—

40

(a) There was much, fortunately, in Louis's character that was really refined and elegant, and which left an unmistakable impress on the nation. He had made it his study to support the character of a great king with a becoming dignity and splendour, for he felt himself the centre of Europe as well as of France. His fine person also was of much service to him. Hence, as regards merely external manner, his Court has, perhaps, never been surpassed, and it is not surprising that it should have become a model to Europe. It combined a dignified etiquette with graceful ease. Every one knew and acquiesced in his position, without being made to feel his inferiority.

(b) At last the time for the examinations came. One morning we started for the Sorbonne after a good breakfast off a chop and a cup of coffee. At seven o'clock the doors were opened and we went into the examination room. On both sides there were about twenty parallel tables, and each of us was given a long sheet of paper with the printed heading: University of France. An old professor got up and gave out the subject for Latin prose. As soon as he had finished—it was a letter from Horace to Tibullus—we all set to work. I had been writing for nearly two hours when I was disturbed by the shuffling of feet. I looked up and saw the examiners passing into the next room for lunch.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer the questions marked with an asterisk (\*) and any two others*

*The figures in the margin indicate full marks*

## \* 1. Translate into English two of the following passages :—

40

(a) La conversation dans le café avait roulé sur les revenants et les apparitions, et presque chacun des assistants avait contribué de sa petite part au fonds d'informations sur ce sujet nébuleux et quelque peu rebattu. Les opinions allaient de l'incrédulité absolue à la foi puérile.

— Voyez, dit quelqu'un, solennel, voyez les étranges histoires que nous racontent les marins.

— Je ne vous conseillerais pas de les croire toutes, dit un homme aux manières brusques, rasé de frais, qui avait écouté sans dire grand'chose. Voyez-vous, quand un marin vient à terre, on s'attend à ce qu'il ait quelque chose à raconter, sinon ses amis seraient un peu déçus.

— C'est un fait bien avéré, interrompit le premier d'un ton assuré, que les marins sont très sujets à avoir des visions.

— Oui, dit l'autre, d'un ton caustique, ils les voient généralement en double, et la secousse qu'en éprouve leur système nerveux leur donne fréquemment des maux de tête le lendemain matin.

(b) Nous vivons à une époque de voleurs. Mais... quels voleurs ! C'est magnifique ! Aucun de vous n'ignore que, pareillement à l'Amour, l'Art justifie tout ! Or le vol, tel qu'il se pratique aujourd'

lui, sort tellement de l'ordinaire et atteint une si absolue beauté, qu'il force l'admiration et crochette l'estime. . . Il a suivi le progrès et il est en passe de le dépasser. Il s'est élevé, il a gagné les classes supérieures, l'élite. C'est maintenant du grand, du haut vol, de large envergure, sans besoin, presque par plaisir. Le voleur moderne a des rentes, automobiles, hôtel, château et pignon sur rue. C'est un artiste dans toute la rigueur du mot. Il obéit à une irrésistible vocation et, ainsi qu'au tambourinaire de Daudet, 'ce lui est venu de nuit, en écoutant, non pas chanter, mais grincer le rossignol.' Il s'écrie un matin : 'Et moi aussi, je serai cambrioleur.'

- (c) Le marchand de cercueils vient de trousseur ses manches  
 Et rabote en sifflant, les pieds dans les copeaux.  
 L'année est bonne; il n'a pas le moindre repos  
 Et même il ne boit plus son gain tous les dimanches.

Tout en jouant parmi les longues bières blanches,  
 Ses enfants, deux blondins tout roses et dispos,  
 Quand passe un corbillard, lui tirent leurs chapeaux  
 Et bénissent la mort qui fait vendre des planches.

La mère, supputant de combien s'accroîtra  
 Son épargne, s'il vient un nouveau choléra,  
 Tricote, en souriant, au seuil de la boutique;

La mère, supputant de combien s'accroîtra  
 Offre un tableau de paix naïve et domestique.  
 De bien-être honorable et de bonne santé.

2. Compare the characters of the dramas of Corneille with the characters of the dramas of Racine. 15

\*3. By what writings has Bossuet become famous? Explain. 15

4. Write notes on—*L'Art Poétique* by Boileau; *Émile* by J.-J. Rousseau; *Le Génie du Christianisme* by Chateaubriand. 15

5. Give the etymology of the following words:—*aôât, brouette, demoiselle, lulette, même*. 15

\*6. What is the significance of the Strasburg Oaths in the history of the French language? Retranslate in modern French this quotation taken from them:—

'Pro Deo amur et pro christian poblo et nostro commun salvament, d'ist di en avant, in quant Deus savir et podir me dunat, si salvarai eo cist meon fradre Karlo et in adjudha et in cadhuna cosa, in o quid il mi altresi fazet.'

7. Explain the manner in which the following words have gradually changed their meaning:—*carillon, chercher, drapeau, ombrageux, viande*. 15

8. What do you mean by popular formation of words and artificial (or scientific) formation of words? Compare these two processes as regards French. 15

## FRENCH—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any *three* of the following into English :— 30
- (a) Percé jusques au fond du cœur  
 D'une atteinte imprévue aussi bien que mortelle,  
 Misérable vengeur d'une juste querelle,  
 Et malheureux objet d'une injuste rigueur,  
 Je demeure immobile, et mon âme *abattue*  
 Cède au coup qui me tue.  
 Si près de voir mon feu récompensé,  
 Ô Dieu, l'étrange peine !  
 En cet affront mon père est l'offensé,  
 Et l'offenseur, le père de Chimène !
- (b) L'honneur vous en est dû, je ne pouvais pas moins,  
 Etant sorti de vous et nourri par vos soins.  
 Je m'en tiens trop heureux, et mon âme est ravie  
 Que mon coup d'essai *plaise* à qui je dois la vie;  
 Mais parmi vos plaisirs ne soyez point jaloux  
 Si je m'ose à mon tour satisfaire après vous.  
 Souffrez qu'en liberté mon désespoir *éclate*,  
 Assez et trop longtemps votre discours le flatte,  
 Je ne me repens point de vous avoir servi,  
 Mais rendez-moi le bien que ce coup m'a ravi.
- (c) Les exemples vivants sont d'un autre pouvoir :  
 Un prince dans un livre apprend mal son devoir.  
 Et qu'a fait, après tout, ce grand nombre d'années,  
 Que ne puisse égaler une de mes journées ?  
 Si vous fûtes vaillant, je le suis aujourd'hui ;  
 Et ce bras du royaume est le plus ferme appui.  
 Grenade et l'Aragon tremblent quand ce fer brille :  
 Mon nom sert de rempart à toute la Castille :  
 Sans moi vous passeriez bientôt sous d'autres lois,  
 Et vous *auriez* bientôt vos ennemis pour rois.
- (d) Qu'on *est* digne d'envie  
 Lorsqu'en perdant la force on perd aussi la vie !  
 Et qu'un long âge apprête aux hommes généreux,  
 Au bout de leur carrière, un destin malheureux !  
 Moi, dont les longs travaux ont acquis tant de gloire,  
 Moi, que jadis partout a suivi la victoire,  
 Je me vois aujourd'hui, pour avoir trop vécu,

Recevoir un affront et demeurer vaincu.  
 Ce que n'a pu jamais combat, siège, embuscade,  
 Ce que n'a pu jamais Aragon ni Grenade,  
 Ni tous vos ennemis, ni tous mes envieux,  
 Le comte en votre cœur l'a fait presque à vos yeux.

2. Voltaire has observed : ' Lorsque Corneille donna *Le Cid*, les Espagnols avaient sur tous les théâtres de l'Europe la même influence que dans les affaires publiques, leur goût dominait, ainsi que leur politique.' How far is he correct in your opinion? 10

3. Describe the salient features of the character of Don Rodrigue as painted by Corneille in his *Le Cid*. 8

4. What do you know of the views of Corneille on tragedy? How far does *Le Cid* illustrate those views? 10

5. Account for the tenses used in the verbs italicized in the passages quoted in Question 1. 12

6. Translate into English any one of the following :— 30

(a) Souvent sur la montagne, à l'ombre du vieux chêne,  
 Au coucher de soleil, tristement je m'assieds;  
 Je promène au hasard mes regards sur la plaine,  
 Dont le tableau changeant se déroule à mes pieds.  
 Ici, gronde le fleuve aux vagues écumantes,  
 Il serpente, et s'enfonce en un lointain obscur;  
 Là, le lac immobile étend ses eaux dormantes  
 Où l'étoile du soir se lève dans l'azur.  
 Au sommet de ces monts couronnés de bois sombres,  
 Le crépuscule encor jette un dernier rayon,  
 Et le char vaporeux de la reine des ombres  
 Monte, et blanchit déjà les bords de l'horizon.  
 Cependant, s'élançant de la flèche gothique,  
 Un son religieux se répand dans les airs,  
 Le voyageur s'arrête, et la cloche rustique  
 Aux derniers bruits du jour mêle de saints concerts.

(b) Non, sous quelque drapeau que le barde se range,  
 La muse sert sa gloire et non ses passions!  
 Non, je n'ai pas coupé les ailes de cet ange  
 Pour l'atteler hurlant au char des factions!  
 Non, je n'ai point couvert de masque populaire  
 Son front resplendissant des feux du saint pharis,  
 Ni pour fouetter et mordre, irritant sa colère,  
 Changé ma muse en Némésis!  
 D'implacables serpents je ne l'ai point coiffée,  
 Je ne l'ai pas menée une verge à la main,  
 Injuriant la gloire avec le luth d'Orphée,  
 Jeter des noms en proie au vulgaire inhumain.  
 Prostituant ses vers aux clameurs de la rue,  
 Je n'ai pas arraché la prêtresse au saint lieu,  
 A ses profanateurs je ne l'ai pas vendue,  
 Comme Sion vendit son Dieu!

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate *three* of the following extracts into English :—

24

(a) La plus grande bassesse de l'homme est la recherche de la gloire mais c'est cela même qui est la plus grande marque de son excellence; car, quelque possession qu'il ait sur la terre, quelque santé et commodité essentielle qu'il ait, il n'est pas satisfait s'il n'est dans l'estime des hommes. Il estime si grande la raison de l'homme que, quelque avantage qu'il ait sur la terre, s'il n'est placé avantageusement aussi dans la raison de l'homme, il n'est pas content. C'est la plus belle place du monde : rien ne peut le détourner de ce désir, et c'est la qualité la plus ineffaçable du cœur de l'homme.

(b) Quand on veut reprendre avec utilité, et montrer à un autre qu'il se trompe, il faut observer par quel côté il envisage la chose, car elle est vraie ordinairement de ce côté-là, et lui avouer cette vérité, mais lui découvrir le côté par où elle est fautive. Il se contente de cela, car il voit qu'il ne se trompait pas, et qu'il manquait de voir tous les côtés. Or, on ne se fâche pas de ne pas tout voir, mais on ne veut pas s'être trompé; et peut-être que cela vient de ce que naturellement l'homme ne peut tout voir, et de ce que naturellement il ne se peut tromper dans le côté qu'il envisage, comme les appréhensions des sens sont toujours vraies.

(c) Les esprits médiocres condamnent d'ordinaire tout ce qui passe leur portée.—Quelque défiance que nous ayons de la sincérité de ceux qui nous parlent, nous croyons toujours qu'ils nous disent plus vrai qu'aux autres.—La fortune fait paraître nos vertus et nos vices, comme la lumière fait paraître les objets.—Nos actions sont comme les bouts-rimés que chacun fait rapporter à ce qui lui plaît.—L'envie de parler de nous et de faire voir nos défauts du côté que nous voulons bien les montrer fait une grande partie de notre sincérité.—Ce qui nous rend à vanité des autres insupportable, c'est qu'elle blesse la nôtre.

(d) Ceux qui sont nés éloquentes parlent quelquefois avec tant de clarté et de brièveté des grandes choses, que la plupart des hommes n'imaginent pas qu'ils en parlent avec profondeur. Les esprits pesants, les sophistes ne reconnaissent pas la philosophie, lorsque l'éloquence la rend populaire, et qu'elle ose peindre le vrai avec des traits fiers et hardis. Ils traitent de superficielle et de frivole cette splendeur d'expression qui emporte avec elle la preuve des grandes pensées. Ils veulent des définitions, des discussions, des arguments. Si Locke eut rendu vivement en peu de pages les sages vérités de ses écrits, ils n'auraient pas osé le compter parmi les philosophes de son siècle.

2. (a) Give a short historical sketch of Pascal.

8

(b) Describe the origin, aim, and historical setting of the *Pensées*.

12

(c) Write short notes on :—Pyrrhonism, Port-Royal, Jansenism, La Fronde.

8

3. (a) Give the rules, with examples, for the place in French of *Objective Pronouns* of the first, second, and third person.

10

(b) Supply interrogative pronouns in the following sentences :—

8

(i)—est le sujet de ce livre? (ii) Pour—des deux combattez-vous (iii) De—avez-vous causé tout le soir? (iv)—voulez-vous me dire?

## 4. Translate into English :—

20

(a) La dernière année d'études était venue. Les examens de l'École Normale étaient au bout. Il était temps. La jeune fille se sentait bien lasse. Elle comptait sur le succès; son frère avait toutes les crances pour lui. Au lycée tous ses professeurs s'accordaient à louer son travail et son intelligence. Mais la responsabilité qui pesait sur le garçon l'accablait tellement qu'il en perdait ses moyens, à mesure qu'il approchait de l'examen. Une extrême fatigue, la crainte d'échouer et une timidité maladive le paralysaient d'avance. Il tremblait à la pensée de paraître en public devant ses juges. Il avait toujours souffert de sa timidité : en classe il rougissait, il avait la gorge serrée quand il lui fallait parler.

(b) Un gentilhomme attaché depuis longtemps au cardinal Mazarin avait reçu bien des promesses de ce dernier sans en être devenu plus riche. Un jour il laissa voir son mécontentement et Son Éminence lui promit de nouveau de songer à lui. Notre homme cependant, qui ne faisait pas grand cas de ses paroles, s'avisa de lui demander pour toute récompense de lui frapper l'épaule de temps en temps avec un air de faveur devant tout le monde, ce que fit volontiers le cardinal. En deux ou trois ans notre gentilhomme se vit accabler de richesse, et Son Éminence plaisantait avec lui de la sottise de ceux qui payaient si bien sa protection.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer the questions marked with an asterisk (\*) and any two others*

*The figures in the margin indicate full marks*

## \* 1. Translate into French two of the following :—

20

(a) The late Duke of Rutland had a favourite retriever, called *Prince*. While the Prince of Wales was on a visit to the Duke as one of his shooting party, the conversation one night turned on this dog, and the Duke said he had not behaved well lately. Next day the Princess came out to luncheon with the shooters, and approaching the Duke, who was then standing alone : " Well ! Duke," she said, " how did the Prince get on to-day ?"—" Very, badly, madam," the Duke replied ; " he won't pick up his birds. If he does not behave better after luncheon, I will send him home." The Princess was naturally astonished ; but she made no remark and went on to luncheon. A little later the Duke was informed that the Prince had been inquired after, not the dog ; and so he hastened to make his apologies.

(b) The Venetian gondola is as free and graceful in its gliding movement as a serpent. It is twenty or thirty feet long, and is narrow and deep like a canoe ; its sharp bow and stern sweep upward from the water like the horns of a crescent, with the abruptness of the curve slightly modified. The bow is ornamented with a steel comb with a battle-axe attachment, which threatens to cut passing boats in two occasionally, but never does. The gondola is painted black, because, in the zenith of Venetian magnificence, the gondolas became too gorgeous altogether, and the Senate decreed that all such

display must cease, and a solemn, unembellished black be substituted. Reverence for the hallowed past and its traditions keeps the dismal fashion in force, now that the compulsion exists no longer.

(e) 'Sergeant-Major Morris,' he said, introducing him. The sergeant-major shook hands, and, taking the proffered seat by the fire, watched contentedly while his host got out whisky and tumblers and put a small copper kettle on the fire. At the third glass his eyes got brighter, and he began to talk, the little family circle regarding with eager interest this visitor from distant parts, as he squared his broad shoulders in the chair and spoke of wild scenes and valorous deeds, of wars and plagues and strange peoples.

'Twenty-one years of it,' said Mr. White, nodding at his wife and son. 'I would like to go to India myself, just to look round a bit, you know.'

\*2. State the various forms of the third person of the personal pronoun, masculine and feminine, singular and plural, used as a direct object and as an indirect object. Show them exemplified in short sentences. 10

3. Conjugate in all persons the indicative present and past indefinite of the verbs *aller* and *se repentir*. 10

4. Give in French the contrary of the following adjectives :— 10  
*patient, facile, grand, naturel, dur, superflu, agréable, content, transparent, ingrat.*

\* 5. Translate into idiomatic French the following :— 10

- (a) To alter beyond recognition.
- (b) To make an appointment to meet somebody.
- (c) Trespassers will be prosecuted.
- (d) I have heard of him.
- (e) The king followed in his father's footsteps.

\*6. Who were the Huguenots? What edict has become famous in French history in connexion with them? Explain. 10

7. What is the Bayeux Tapestry? With what events of Franco-English history is it connected? Explain. 10

8. In what ways did the following events influence the course of the French Revolution which began in 1789?— 10

- (a) The taking of the Bastille.
- (b) The flight to Varennes.
- (c) The coalition against France.



## LATIN—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any *three* of the following, answering also the annexed questions :—

- (a) Vere novo, gelidus canis cum montibus humor 10  
 liquitur et Zephyro putris se glaeba resolvit,  
 depresso incipiat iam tum mihi taurus aratro  
 ingemere et sulco attritus splendescere vomer.  
 illa seges demum votis respondet avari  
 agricolae, bis quae solem, bis frigora sensit;  
 illius immensae ruperunt horrea messes.  
 at prius ignotum ferro quam scindimus aequor,  
 ventos et varium caeli praediscere morem  
 cura sit ac patrios cultusque habitusque locorum  
 et quid quaeque ferat regio et quid quaeque recuset.  
 hic segetes, illic veniunt felicius uvae,  
 arborei fetus alibi, atque inussa virescunt  
 gramina.

Explain the mood of *incipiat*, *ferat*, *recuset*, and the tense of *ruperunt*. 10

Scan the line beginning *illius immensae* . . .

- (b) Quinque tenent caelum zonae; quarum una corusco 10  
 semper sole rubens et torrida semper ab igni;  
 quam circum extremae dextra laevaque trahuntur  
 caeruleae, glacie concretæ atque imbribus atris;  
 has inter mediamque duae mortalibus aegris  
 munere concessae divum, et via secta per ambas,  
 obliquus qua se signorum verteret ordo.  
 mundus, ut ad Scythiam Rhipaeasque arduus arces  
 consurgit, premitur Libyae devexus in Austros.  
 hic vertex nobis semper sublimis; at illum  
 sub pedibus Styx atra videt Manesque profundi.  
 maximus hic flexu sinuoso elabitur Anguis  
 circum perque duas in morem fluminis Arctos,  
 Arctos Oceani metuentis aequore tingui.

Whose views are set forth here by Virgil? Where are the 10  
 following regions mentioned above :—*Scythiam*, *Rhipaeasque arces*,  
*Libyae*, *Oceani*? Were they accurately localized by Virgil's contemporaries?

- (c) Sed neque Medorum silvae, ditissima terra,  
nec pulcher Ganges atque auro turbidus Hermus  
laudibus Italiae certant, non Bactra neque Indi  
totaque turiferis Panchaia pinguis arenis.  
haec loca non tauri spirantes naribus ignem  
invertere satis immanis dentibus hydri,  
nec galeis densisque virum seges horruit hastis;  
sed gravidæ fruges et Bacchi Massicus humor  
implevere; tenent oleae armentaque laeta;  
hinc bellator equus campo sese arduus infert;  
hinc albi, Clitumne, greges et maxima taurus  
victima, saepe tuo perfusi flumine sacro,  
Romanos ad templa deum duxere triumphos.

Explain the cases of—*silvae, laudibus, ignem, dentibus, deum.* 10

Explain the allusion in *satis immanis . . . horruit hastis.*

- (d) Sollicitant alii remins freta caeca, ruuntque  
in ferrum, penetrant aulas et limina regum;  
hic petit excidiis urbem miserosque Penates,  
ut gemma bibat et Sarrano dormiat ostro;  
condit opes alius defossoque incubat auro;  
hic stupet attonitus rostris; hunc plausus hiantem  
per cuneos—geminatus enim plebisque patrumque—  
corripuit; gaudent perfusi sanguine fratrum,  
exsilioque domos et dulcia limina mutant  
atque alio patriam quæerunt sub sole iacentem.  
agricola incurvo terram dimovit aratro:  
hinc anni labor, hinc patriam parvosque nepotes  
sustinet, hinc armenta boum meritosque iuvenços.

Explain the customs or events alluded to in the phrases:— 10  
*Sarrano ostro, rostris, plausus per cuneos, plebis patrumque, sanguine fratrum.*

2. Either, Why did Virgil write the *Georgics*? What models did he imitate? In what is he original and personal? 15

Or, Quote a number of lines from *Georgics I* and *II* showing the sympathy of the poet for human beings and his love of family life.

8. UNSEEN TRANSLATION 25

*Ovid in exile advises a friend to live an obscure and simple life.*

O mihi care quidem semper, sed tempore duro  
cognite, res postquam procubuere meae,  
usibus edocto si quicquam credis amico,  
vive tibi et longe nomina magna fuge.  
vive tibi, quantumque potes praelustria vita:  
saevum praelustri fulmen ab igne venit.  
effugit hibernas demissa antemna procellas,  
lataque plus parvis vela timoris habent.  
aspicis, ut summa cortex levis innatet unda,  
cum grave nexa simul retia mergat onus?  
haec ego si monitor monitus prius ipse fuisset,  
in qua debebam forsitan urbe forem.  
dum tecum vixi, dum me levis aura ferebat,  
haec mea per placidas cumba cucurrit aquas.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## 1. Translate :—

16

(a) Quamquam ego iam putabam, iudices, multis viris fortibus ne ignobilitas obiceretur generis, meo labore esse perfectum, qui non modo Curiis, Catonibus, Pompeiis, antiquis illis fortissimis viris, novis hominibus, sed his recentibus, Mariis et Didiiis et Caeliis, commemorandis iacebant. Cum ego vero tanto intervallo claustra ista nobilitatis refregissem, ut aditus ad consulatum posthac, sicut apud maiores nostros fuit, non magis nobilitati quam virtuti pateret : non arbitrabar, cum ex familia vetere et illustri consul designatus ab equitis Romani filio, consule, defenderetur, de generis novitate accusatores esse dicturos. Etenim mihi ipsi accidit ut cum duobus patriciis, altero improbissimo atque audacissimo, altero modestissimo atque optimo viro, peterem ; superavi tamen dignitate Cantilinam, gratia Galbam.

(b) At enim agit mecum austere et Stoice Cato. Negat verum esse, allici benevolentiam cibo : negat iudicium hominum in magistratibus mandandis corrumpi voluptatibus oportere. Ergo ad coenam, petitionis causa, si quis vocat, condemnatur. 'Quippe,' inquit ; 'tu mihi summum imperium, tu summam auctoritatem, tu gubernacula rei publicae petas fovendis hominum sensibus, et deleniendis animis, et adhibendis voluptatibus ? Utrum lenocinium,' inquit, 'a grege delicatae iuventutis, an orbis terrarum imperium a populo Romano petebas ?' Horribilis oratio ; sed eam usus, vita, mores, civitas ipsa respuit.

(c) Primis tenebris silentio mota castra : boves aliquanto ante signa acti. Ubi ad radices montium viasque angustas ventum est, signum extemplo datur ut accensis cornibus armenta in adversos concitentur montes. Et metus ipse relucens flammae extemplo a capite calorque iam ad vivum ad imaue cornua veniens velut stimulatos furore agebat boves. Quo repente discursu haud secus quam silvis montibusque accensis omnia circa virgulta ardere visa ; capitumque irrita quassatio excitans flammam hominum passim discurrentium speciem praebebat.

(d) Iam et sinistro cornu Romano, ubi sociorum equites adversus Numidas steterant, consertum proelium erat, segne primo et a Punica coeptum fraude. Quingenti ferme Numidae, praeter solita arma telaque gladios occultos sub loriciis habentes, specie transfugarum cum ab suis parmas post terga habentes adequitassent, repente ex equis desiliunt parmisque et iaculis ante pedes hostium proiectis in mediam aciem accepti ductique ad ultimos considerare ab tergo iubentur. Ac dum proelium ab omni parte conseritur, quieti manserunt : postquam omnium animos oculosque occupaverat certamen, tum arreptis scutis, quae passim inter acervos caesorum corporum strata erant, aversam adoriuntur Romanam aciem tergaque ferientes ac poplites caedentes stragem ingentem ac maiorem aliquanto pavorem ac tumultum fecerunt.

2. In what circumstances was the speech for Murena delivered? 10  
Summarise its construction.

3. Write notes on eight of the following :—*Chaldaei, stipendia, Mithridates, municipia, Zeno, lectuli Punicani, busta Gallica, furculas Caudinas, Himilco, tribunal, campus Martius, dilectus, socii.* 12

4. *Either*, Discuss the composition of the army that Hannibal led into Italy. 10

*Or*, Give a description, with a sketch-map, of the battle of Cannae.

5. Explain the uses of the subjunctive illustrated in the passages in Question 1. 12

Give the participles of—*iaceo, venio, peto, respuo, ago, proicio, foveo*.

6. Discuss the form *passim*, and give other instances of adverbs formed in the same way. 10

Explain, with examples, the various uses of *dum*.

7. Translate :— 30

(a) *Dictatore habente comitia Caesare consules creantur Iulius Caesar et P. Servilius : is enim erat annus quo per leges ei consulem fieri liceret. His rebus confectis, cum fides tota Italia esset angustior, neque creditae pecuniae solverentur, constituit ut arbitri darentur : per eos fierent aestimationes possessionum et rerum, quanti quaeque earum ante bellum fuisset, atque eae creditoribus traderentur. Hoc et ad timorem novarum tabularum tollendum minuendumque, qui fere bella et civiles dissensiones sequi consuevit, et ad debitorum tuendam existimationem esse aptissimum existimavit.*

(b) *Interim cum seiret Clodius—neque enim erat difficile scire—iter sollemne, legitimum, necessarium ante diem xiii Kal. Feb. Miloni esse Lanuvium ad flaminem prodendum, quod erat dictator Lanvii Milo, Roma subito ipse profectus pridie est, ut ante suum fundum, quod re intellectum est, Miloni insidias conlocaret ; atque ita profectus est, ut contionem turbulentam, in qua eius furor desideratus est, quae illo ipso die habita est, relinqueret, quam nisi obire facinoris locum tempusque voluisset, numquam reliquisset.*

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

#### A. PROSE COMPOSITION

1. Translate into Latin :— 15

(a) What was I to do? I could not persuade him to let the poor fellow go.

(b) When they heard the news, they sent messengers to inform the general of the impending danger.

(c) I do not know where we are going or at what hour we shall arrive.

(d) He asked me to forgive him, saying he was ashamed of what he had done.

(e) If you return on the 18th of April I will tell you what I intend to do.

2. Turn the following passage into *Oratio Obliqua* depending upon *disit* :— 5

' Vos vera arma invenistis, quibus ab ira Romanorum defendi potestis. Ite Romam ad Senatum ; aestimabunt patres, utrum plus

ante poenae an nunc veniae meriti sitis. Eventum precibus vestris, quem videbitur, senatus dabit.'

3. Translate into Latin :—

50

When there was no longer any hope of saving the ship, the prince with a few followers was let down into a small boat, and would have reached the land safely, if he had not been more anxious about the safety of others than his own. For his sister left behind in the vessel began to call upon her brother, praying him not to abandon her to perish by such a cruel death. So touched by pity he ordered the sailors to bring the boat close to the ship again that he might more easily take away his sister with him. But when they had done so many people jumping down together into the boat, in the hope of saving their lives, the boat was overloaded with the great crowd and immediately sank. All met the same death, with the exception of one man, who clung to the mast of the ship, and, supported thus the whole night, told the story of the disaster to those who came to him in the morning.

B. GRAMMAR

4. Give the chief ways of expressing conditional sentences in Latin. Illustrate your answer with examples, which should be translated. 5

5. How do you translate *as* in the following sentences? The whole sentence need not be translated :— 5

(a) He is not so foolish *as* to do such a thing.

(b) I will come *as* quickly *as* possible.

(c) This is the same *as* that.

(d) *As* you live so you will die.

(e) *As* to the prisoners I know nothing.

6. Give with examples the rules for the expression of 5

(a) Place at which—where?

(b) Place to which—whither?

(c) Place from which—whence?

7. Decline in the singular *hoc unum scelus*; and in the plural *admirabilis quaedam sententia*. 5

Give the future participles of *morior* and *tollo*; the present participles of *pereo* and *cunctor*; the principal parts of *audeo* and *aveho*.

C. ROMAN HISTORY

Answer any THREE of the following questions

8. Sketch briefly the development of Rome's provincial empire before 100 B.C., giving the occasion on which each province was added. 10

9. Give some account of the social and political reforms of Caius Gracchus. What was the result of them? 10

10. Give a brief account of Caesar's campaigns in Gaul. 10

11. Describe briefly the main events of the Jugurthine War, and show its importance in Roman History. 10

12. Sketch the character of Antonius and account for his final failure.

13. What was the meaning of Augustus's claim that he had 'restored the Republic,' and how far was it true? 10

14. Give a brief account of any two of the following :—Pyrrhus, Fabius Maximus Cunctator, M. Sertorius, Sextus Pompeius. 10

## BENGALI (CLASSICAL)—PASS

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 RAI KHAGENDRANATH MITRA, BAHADUR, M.A.  
 MR. BASANTARANJAN RAY, VIDVADBALLABH.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*Answers to be in Bengali : Write your answers in EITHER সাধু ভাষা OR চলিত ভাষা avoiding a mixture of the two styles in the same composition*

## DRAMA TEXTS : 75 marks

1. *Either*, Discuss the central theme of the tragedy underlying the drama *Visarjan*. How far can you characterize the work as a psychological one? 15

*Or*, How do the forces of conflict operate in bringing the tragedy to its climax in *Visarjan*? In what way does the character of *Aparnā* function in the catastrophe?

*Or*, Give a sketch of the character of EITHER *Raghupati* OR *Jayasiṅha*.

2. *Either*, 'The fall as *Jogesh* was the result of external forces, no doubt, but there was also an inherent weakness and want of balance in him which contributed largely towards it. The foundations were never strong.' Discuss. 15

*Or*, 'Girish Chandra Ghosh's dramas are documents of first-rate importance as pictures of the contemporary middle class Bengali society of Calcutta, in spite of their rather melodramatic, and at times rather morbid, character.' Discuss *Praphulla* with reference to the above statement.

*Or*, How do the minor characters in *Praphulla* contribute to the unfolding of the plot?

3. Which of the two dramas, *Visarjan* and *Praphulla*, appeals to you more, and what are your reasons for your preference? 15

4. Explain *five* of the following passages (not more than *three* from one group), with full reference to the context and with discussion of their dramatic appropriateness :— 30

## GROUP A

(a) কি, কি, কি ভাব্ছ? কাজ শুহিয়েছ; আমি বুঝতে পেরেছি।

(b) যা, হেলেটায় মাথা না খেয়ে আর নিশ্চিন্ত হ'চ্ছ না।

(c) কে বাবা তোমরা যুগলে ! তোমরা কি রমেশ-ভায়ার ইটি-দেবতা ?

(d) আমার নিতান্ত ইচ্ছা যে রাজলক্ষ্মী আপনার ঘরে বিচলা হ'ন ।

(e) আমার ধর্মের সংসারে পাপ সঁধিয়েছে ।

(f) যেন আমার মৃত্যুতে তোমার পাপের প্রায়শ্চিত্ত হয় ।

#### GROUP B

(g) দেবী নেমে আসে  
মানবী হইয়া, যারে ভালোবাসি তাঁর মুখে ।

(h) মানবের  
বুদ্ধি দীপ-সম, যত আলো করে দান  
তত রেখে দেয় সংশয়ের ছায়া ।

(i) গুরুদেব, হেন আজ্ঞা  
মাতৃ-আজ্ঞা ব'লে করিলে প্রচার !

(j) মোর  
স্নেহে ষটিতে দিব না পাপ, অভিশাপ  
আনিব না স্নেহের উপরে ।

(k) দেবী গুরু বাহা ছিল  
এক দণ্ডে বিসর্জিত—বিশ্ব-মাঝে  
কিছু রহিল না আর ।

(l) দেবী চাহে, তাই ব'লে দিস্ ! আমি  
কেহ নই ! হায় অকৃতজ্ঞ ! দেবী তোর  
কী ক'রেছে ?

#### RHETORIC AND GRAMMAR: 25 marks

5. *Either*, Enumerate the more important figures of speech based on *either* similarity or difference, giving their names in Bengali Rhetoric, and define and illustrate them. 10

Or, Explain *five* of the following figures of speech, with an example in each case :—

উৎপ্রেক্ষা, নিশ্চয়, লক্ষণা, সমাসোক্তি, পর্যায়োক্তি, অপহৃত্তি, বিচিত্র, দীপক ।

6. Answer *two* of the following :—

15

(a) Indicate the main points of difference between the সাধু ভাষা and the চলিত ভাষা.

(b) Discuss the pronunciation of ব-কলা, ব-কলা, ক, জ, খ of Bengali.

(c) Give the full conjugation of the root কৰ্ in the চলিত ভাষা ।

(d) Give the more important formative suffixes of Bengali (Pure Bengali Suffixes), with illustrative words.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Mention what you consider to be the main characteristics of Vaisnava literature and illustrate your answer by a reference to three of its principal exponents. 10

2. *Either*, Give a proper estimate of Bharat Chandra as a poet. 10  
*Or*, Give in your own words the story of Hari Hore and how he obtained the favour of Annapurnā. 10

3. *Either*, Describe the character of Phullara as depicted by Kavi Kankan. 10

*Or*, Kavi Kankan has been called 'a poet of the transition period' (সন্ধি যুগের কবি)। Justify this remark. 10

4. Explain the following passages :— 20

(a) নীরদ নয়ানে                      নীর ঘন সিঞ্ঝনে  
 পুলক-মুকুল-অবলম্ব ।  
 শ্বেদ মকরন্দ                      বিন্দু বিন্দু চ্যুত  
 বিকশিত ভাব-কলস ॥ ?  
 কি পেখলুঁ নটবর                      গৌর কিশোর ।  
 অভিনব হেম                      কলপতরু সঞ্চর  
 সুরধুনী তীরে উজোর ॥

(b) *Either*,

ব্রজবাসিগণ জীবন শেষ ।  
 দেখিয়া উঠিলা নটন বেশ ॥  
 কালিয়া ফণায় নটন বজ্র ।  
 ছেরি জহু তনু জীবন সজ্র ॥  
 মরণ-শরীরে আইল প্রাণ ।  
 হেরিয়া ঐছন সবহু মান ॥

*Or*,

বাহা বাহা নিকসরে তনু তনু-জ্যোতি ।  
 তাঁহা তাঁহা বিজুরি চমকময় হোতি ॥  
 বাহা বাহা অরুণ চরণ চল চলই ।  
 তাঁহা তাঁহা ধল কমল-দল খলই ॥



(c)

*Either,*

যন্ত্র পাতি ব্যাঘ্র মারে      নখ বিচে ঘরে ঘরে  
কাপড়ি সন্ন্যাসী লয় ছাল ।  
তাড়িয়া মহিষ ধরে      সিংহ বিচে সিংহাদারে  
চৰ্ম্ম বিচে নিরমিত ঢাল ॥

*Or,*

বীর সমর বীর পুরুষ দুয়ারে ঝাপাই সিংহ-আকার ।  
অভয়া-পদে নিজ চিত্ত নিবেসিয়া নির্ভয়ে করে মোহামার ॥  
কোর্টালের আদেশে যত সেনাপতি ফরিকাল হয় আশ্রয়ান ।  
কোপীয়া মোহাবীর ফরিকাল নিয়োজি কাটিয়া করে খান খান ॥

(d)

*Either,*

কি দোষে মুছিল হরি-মন্দির কোঁটায় ।  
কি দোষে ফেলিল ছিঁড়ি তুলসী-মালায় ॥  
হের দেখ তুলসী-পত্রের গড়াগড়ি ।  
বিষপত্র লইয়া দেখহ রড়ারড়ি ॥

*Or,*

ভালে য়ার সুধাকর গলায় গরল ।  
কপালে অনল য়ার শিরে গজাজল ॥  
সম য়ার সুধা বিবে হুতাশন জল ।  
অস্ত্রের যে অমঙ্গল তাঁরে সে মঙ্গল ॥

5. Compare and contrast the dominant characteristics of Michael 12  
Madhusudan Dutt's *Brajangana* with those of the old Vaisnava poetry.

6. *Either,* Give a critical estimate of Rabindranāth as a poet of 10  
human nature.

*Or,* Explain the idea contained in এবার ফিরাও য়োরে । 10

7. Explain fully with reference to the context :— 18

(a)

*Either,*

কে তুমি, ঞ্চামেরে ডাক, রাধা যথা ডাকে—

হাহাকার রবে ?

কে তুমি, কোন যুবতী, ডাক এ বিরলে সত্তি,

অনাথা রাধিকা যথা ডাকে গো মাধবে ?

অভয়-হৃদয়ে তুমি কহ আসি য়োরে—

কে না বাধা এ জগতে শ্রাম-প্রেম ডোরে ?

Or,

ভবে বোঁসিন্দুর বিন্দু দেখিছ ললাটে,  
সধবা বলিয়া আমি রেখেছি ইহারে।  
কিন্তু অগ্নি-শিখা সম হে সখি সৌমন্তে মম  
জ্বলিছে এ রেখা আজি কহিছ তোমারে—  
গোপিলে এ সব কথা প্রাণ যেন ফাটে।

(b)

Either,

স্বর্গ মর্ত্য করে যদি স্থান-বিনিময়,  
তথাপি বাঙ্গালী নাহি হবে একমত;  
প্রতিজ্ঞায় কল্লতরু, সাহস দুর্জয়।  
কার্যকালে খোঁজে হবে নিজ নিজ পথ।

Or,

এই নহে ভারতের বোদনের শেষ;  
পলাশী-যুদ্ধের নহে এই পরিণাম।  
যেই শক্তি-প্রোতস্বতী ভেদি বঙ্গদেশ  
নির্গত হইল আজি, তুমি অবিশ্রাম  
হিমাচল হ'তে বেগে করিবে গমন  
কুমারীতে লঙ্কাধীপে, লজ্জা পারাবার।

(c)

Either,

কুমা যথা ক্ষীণ দুর্বলতা,  
হে রুদ্র, নিষ্ঠুর যেন হ'তে পারি তথা  
তোমার আদেশে; যেন রসনায় মম  
সত্যাবাক্য বলি' উঠে খর খড়্গা সম  
তোমার ইঙ্গিতে। যেন রাখি তব মান  
তোমার বিচারাসনে ল'য়ে নিজ স্থান।

Or,

যারে তুমি নীচে ফেল সে তোমারে বাঁধিবে যে নীচে।  
পশ্চাতে রেখেছ যারে সে তোমারে পশ্চাতে টানিছে।  
অজ্ঞানের অন্ধকাবে  
আড়ালে ঢাকিছ যারে  
তোমার মঙ্গল ঢাকি' গড়িছে সে ঘোর ব্যবধান।

8. Either, Give in your own words a description of the English camp on the eve of the Battle of Plassey. 10

Or, Mention some of the important points in Mohanlal's speech on the battle-field of Plassey. 10

## THIRD PAPER

*Candidates are required to give their answers in standard Bengali in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Bengali one of the following extracts :—

20

(a) The man's power is active, progressive, defensive. He is eminently the doer, the creator, the discoverer, the defender. His intellect is for speculation and invention; his energy for adventure, for war, and for conquest, wherever war is just, wherever conquest necessary. But the woman's power is for rule, not for battle,—and her intellect is not for invention or creation, but for sweet ordering, arrangement, and decision. She sees the qualities of things, their claims, and their places. By her office, and place, she is protected from all danger and temptation. The man, in his rough work in the open world, must encounter all peril and trial :—to him, therefore, the failure, the offence, the inevitable error; often he must be wounded, or subdued, often misled, and *always* hardened. But he guards the woman from all this; within his house, as ruled by her, unless she has herself sought it, need enter no danger, no temptation, no cause of error or offence. This is the true nature of home—it is the place of peace; the shelter, not only from all injury, but from all terror, doubt, and division. In so far as it is not this, it is not home; it is then only a part of that outer world which you have roofed over, and lighted fire in.

(b) It is the ancient feeling of the human heart, that knowledge is better than riches; and it is deeply and *sacredly true*. To mark the course of human passions as they have flowed on in the ages that are past; to see why nations have risen, and why they have fallen; to speak of heat and light, and the winds; to know what man has discovered in the heavens above and in the earth beneath; to hear the chemist unfold the marvellous properties that the Creator has locked up in a speck of earth; to be told that there are worlds so distant from our own, that the quickness of light, travelling since the world's creation, has never yet reached us;—it is worth while in the days of our youth to strive hard for this great discipline. It is surely worth while to pass sleepless nights for this; to give up for it laborious days; to spurn for it present pleasures; to endure for it affliction poverty; to wade for it through darkness, and sorrow, and contempt, as the great spirits of the world have done in all ages and in all times.

2. *Either*, Give a general review of the literary styles of Pyāri Chāṇḍ Mitra, Tārāśaṅkar Tarkaratna, and Baṅkim Chandra Chatterji as used in your text books.

*Or*, Compare Sarat Chandra Chatterji with Baṅkim Chandra Chatterji as novelists, confining your remarks mainly to your text books.

3. Rewrite one of the following passages in চলিত ভাষা (standard colloquial Bengali) :—

(a) দিবাবসানে দিবাগুল লোহিতবর্ণ হইল; সন্ধ্যা-রাগে রক্তবর্ণ হইয়া চক্ৰবাক্মিখুঁ ভিন্ন ভিন্ন দিকে উৎপত্তি হওয়াতে বোধ হইল যেন, বিরহ-বেদনা স্মৃতি-পথাক্রমে হওয়াতে তাহাদিগের জন্ম বিলীর্ণ হইয়াছে এবং গাত্র হইতে রক্তধারা পড়িতেছে। সন্ধানিত ব্যক্তির বিপদ কালেও

নীচ পদবীতে পদার্পণ করেন না ইহাই জানাইবার নিমিত্ত রবি অন্তঃগমন কালেও পশ্চিমাচলের উন্নত শিখর আশ্রয় করিলেন। দিনকর অন্তঃগত হইলেন কিন্তু রজনী সমাগতা হয় নাই। এই সময়ে তাপের বিগন ও অন্ধকারের অমৃদয় প্রযুক্ত লোকের অন্তঃকরণ আনন্দে প্রকৃত হইল। স্বরূপ সিংহ অন্তাচলের গুহাশায়ী হইলে ধ্বাস্তরূপ দত্তিষুধ নির্ভয়ে অগৎ আক্রমণ করিল। নলিনী দিনমণির বিরহে অলিরূপ অশ্রুজল পরিত্যাগ পূর্বক কমলরূপ নেত্র নিম্নলন করিল।

(৬) যখন মনুষ্যদয় কোন উৎকট ভাবে আচ্ছন্ন হয়, চিন্তার একাগ্রতায় বাহ্যদৃষ্টির প্রতি লক্ষ্য থাকে না, তখন অনৈসর্গিক পদার্থও প্রত্যক্ষীকৃত বলিয়া বোধ হয়। কপালকুণ্ডলার সেই অবস্থা হইয়াছিল। যেন উর্দ্ধ হইতে তাহার কর্ণকূহরে এই শব্দ প্রবেশ করিল, “বৎসে, আমি পথ দেখাইতোছি।” কপালকুণ্ডলা চকিতের জায় উর্দ্ধ-দৃষ্টি করিলেন। দেখিলেন, যেন আকাশ-মণ্ডলে নব-নীরদ-নির্মিত মূর্তি। গলবিলম্বিত-নরকপালমালা হইতে শোণিতস্রুতি হইতেছে; কটিমণ্ডল বেড়িয়া নরকররাজি ছলিতেছে—বামকরে নরকপাল—অঙ্গে রুধিরধারা—মলাটে বিষমোজ্জল-জ্বালা-বিভাসিত-লোচন-প্রান্তে বাল শশী স্ত্রশোভিত। সেই নবকাদম্বিনীসন্নিভ রূপ আকাশ-মার্গে তাঁহার আগে আগে চলিল। কখনও কপাল-মর্দলনীর অবয়ব মেঘে লুক্কায়িত হয়, কখনও নয়নপথে স্পষ্ট বিকশিত হয়।

4. Expound and name the *samāsas* in any six of the compound words underlined in Question 3. 15

5. “কেহ যদি তরুণ বৎসরের ফুল ও পরিণত বৎসরের ফল, কেহ যদি স্বর্ণ ও মর্ত্য একত্র দেখিতে চায়, তবে শকুন্তলার তাহা পাইবে।” 15

Either, Show the appropriateness of the above remark of Goethe from an analysis of অভিজ্ঞান শকুন্তলা নাটক।

Or, Write a short critical appreciation of the *Kūdambari*.

6. Either, Compare the character of Kapāla-Kuṇḍala with that of Mātī Bibī. 12

Or, Compare the character of Rāsbihārī with that of Bīlās.

7. Either, Give a short sketch of the character of Thak Chāchā. 10

Or, Draw a verbal picture of Hindu society from the *Alaler Gharer Dulal*.

## URDU (CLASSICAL)—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Either, Assign the place of *Zūd Pashimān* in Urdū drama. 15  
Or, Discuss fully the chief defects of *Zūd Pashimān*.
2. Discuss fully :— 15

”زود پشیمان ادبی حیثیت سے اور نیز کیرکٹر نگاری

کی حیثیت سے ایک تصنیف لطیف ہے“ \*

3. Give an estimate of the character of either *Yūsuf* or *Husnā*.

4. Comment on the following :— 15

”حق یہ ہے کہ زود پشیمان کی ترجمانی سوائے

ہماری سوسائٹی کے اور کہیں نہیں ہوسکتی“ \*

5. Explain with reference to the context any three of the following : 15

(a) مانا، کہ درات سب کو عزیز ہوتی ہے مگر کیا

اسے اراد سے بھی زیادہ عزیز ہونا چاہئے ؟

(b) اس کا ذرا بھی خیال نہیں کہ وہ بھی انسان ہے

ایک روز وہ بھی عقل و شعور رکھیں گی - کہاں وہ زبانی

روشن خیالی و آزادی اور کہاں یہ عملی استبداد و جباری !

(c) تو آپ کی تقدیر کا ماحصل یہ نکلا کہ نکاح تمام تر

ایک اجتماعی ضرورت ہے اور چونکہ اجتماعی ضروریات کو

آپ بغیر نکاح کے بہتر طریقے پر پورا کرسکتے ہیں اس لئے

شادی کرنا آپ کے لئے جرم ہے \*

(d) افروہ - کس قدر متناقض خیالات دماغ میں چکر کھائے ہیں - کیا یہ جنون ہے ؟ ہاں شاید جنون کی رہی قسم ہے جسے عشق سے تعبیر کیا جاتا ہے \*

6. Define any three of the following :—

15

مراعات النظیر - اشتقاق - لف و نشر غیر مرتب -  
تضاد - ایہام \*

7. Name and explain the figures of speech in the following :—

10

کہوں کیا خوبی اوضاع ابنائے زمان غالب  
بدی کی اس نے کی تھی بارہا نیکی

(b)

جو ہے ربط چشم کو اشک سے تو لگاؤ دل کو زخم سے  
یہ صدف ہے اپنے گہر سے خوش یہ شجر ہے اپنے ثمر سے خوش

## SECOND PAPER

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

1. Explain any three of the following lines :—

20

(a)

روز سیاہ اُسکے مرمو سے جلوہ گر ہے  
تجہہ زلف میں جو دیکھا دیجور کا تماشا

(b)

شیخ یان بات تری پیش نہ جارے ہرگز  
عقل کو چہرے سے مس مجلس رندان میں آ

(c)

گنہی نکلی ہیں لخت دل کی تار اشک سے لڑیاں  
یہ آنکھیں کیوں مرے حلی کے گلے کا ہار ہو پڑیاں

(d)

کھلاے گرچہ شانے سے تم اپنی زلف کے عقدے  
نہ سمجھے یہ کسی دل میں ہزاروں ہیں گرہ پڑیاں

2. Re-write (a) and (d) in Question 1 in modern Urdū, and comment on the phrases **مُرومُرو** and **گرہ پڑیاں**. 6

3. Translate with explanatory notes :—

10

(a)

وہ نگاہیں جو چار ہوتی ہیں  
برچھین دل کے پار ہوتی ہیں  
بدزبانی پہ اُسکی دل مت جا  
ایسی باتیں ہزار ہوتی ہیں

(b)

گر معرفت کا چشم بصیرت میں نور ہے  
تو جس طرف کر دیکھئے اُسکا ظہور ہے  
آتی ہے دل میں اور ہی صورت نظرِ معجب  
شاید یہ آئینہ بھی کسی کے حضور ہے

4. Write a note on the achievements of Wali in the domain of Urdū poetry. 10

5. Translate with notes bearing reference to the context :—

10

وہ کشتہ قوم رہ فدائی  
اُٹھا لڑے کاسے کدائی  
ایک ایک سے عرض حال کرتا  
در در رہ پہرا سوال کرتا  
ہر بزم رہ رانجمن میں پہنچا  
ہر باغ میں ہر چمن میں پہنچا

6. Explain any two of the following lines :—

16

(a)

مرا رونا نہیں رونا ہے یہ سارے گلستان کا  
وہ گل ہوں میں خزانِ ہر گل کی ہے گویا خزانِ مری

(b)

آزائی قمریوں نے طرپیوں نے عندلیبوں نے  
چمن والوں نے ملکر لوٹ لی طرزِ فغان میری

(c)

سورج تو دل میں لقبِ ساقی کا ہے زیبا تجھے  
انجمنِ پیاسی ہے اور پیمانہ بے صہا ترا

(d)

کعبہ پہلو میں ہے اور سوداؤی بتخانہ ہے  
کس قدر شوریدہ سر ہے شوق بے پروا ترا

7. (a) Record your impression of the picture drawn by Ghalib 20  
in the following lines :—

صبحِ عدمِ دازؤِ خاور کھلا  
مہرِ عالمتاب کا منظر کھلا  
خسروِ انجم کے آیا صرف میں  
شب کر تھا گنجینۂ گوہر کھلا  
ہیں کواکب کچھ نظر آتے ہیں کچھ  
دیتے ہیں دھوا کا یہ بازیگر کھلا  
سطحِ گردن پر پڑا تھا رات کو  
موتیوں کا ہر طرف زیور کھلا  
صبح آیا جانبِ مشرق نظر  
اک نگارِ آتشیں رخ سر کھلا

(b) Express in English the following phrases which occur in  
extract (a) :—

4

مہرِ عالمتاب - خسروِ انجم - سطحِ گردن - نگارِ آتشیں رخ



## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any one of the following :—

8

## A

جب سانچہ ہوتی چپکے ہی سے وہ خواجہ سرا اس جوان کو اسی راہ سے لے آتا، تمام شب شراب و کباب اور عیش و عشرت میں کتنی، میں اس کے ملنے سے آرام پاتی، میرے دیکھنے سے خوش ہوتا، جب فجر کا تارا نکلتا اور مؤذن اذان دیتا محلی اسی راہ سے اس جوان کو اس کے گھر پہنچا دیتا۔ ان باتوں سے سوائے اس خواجہ سرا اور در دائیوں کے جنہوں نے مجھے دودھ پلایا تھا اور پالا تھا چوتھا آدمی کوئی واقف نہ تھا \*

## B

بارے جب آفتاب تمام دن کا مسافر تھکا ہوا گرتا پڑتا اپنے محل میں داخل ہوا اور مہتاب دیوانخانہ میں اپنے صاحبوں کو ساتھ لیکر نکل بیٹھا، اسوقت دائی آئی اور مجھ سے کہنے لگی کہ چلو بادشاہ زادی نے یاد فرمایا ہے۔ میں اس کے ہمراہ ہو لیا۔ خلوت میں لیگٹی۔ وہاں روشنی کا یہ عالم تھا کہ شب قدر کی وہاں قدر نہ تھی۔ اور بادشاہی فرش پر مسند بچھی گاؤ تکیہ لگا ہوا اور اسپر شامیانہ موتیوں کی جہالر کا جڑاؤ استادوں پر کھڑا اور سامنے مسند کے جواہر کے درخت پھول پات لگے ہوئے \*

2. Give the story of the love of the princess for the prince. 12

3. Explain with reference to the context :—

8

اگر تان سین اس گھڑی ہوتا تو اپنی تان بھول جاتا اور بیچر بار بار ہو جاتا \*

4. Translate into English any two of the following :—

16

A

شاعر جب اخلاقی مضامین بیان کرتا ہے تو اسکو بصورت  
اکثر نصیحت و پند کا پیرایہ اختیار کرنا پڑتا ہے۔ اسلئے ہمکو بھی  
کہیں کہیں ناصح بننا پڑا ہے۔ مگر اصلی ناصح کی نصیحت اور  
شاعر کے ناصحانہ بیان میں بہت بڑا فرق ہے۔ اصلی ناصح خود  
برائیوں سے پاک ہوکر اور ان سے باز رہنے کی تاکید کرتا ہے  
مگر شاعر چونکہ برائیوں کی ہرہو تصویر کھینچکر دکھاتا ہے اور  
گھر کے بھیدی کی طرح چہپے رستموں کے پترے کھولتا ہے اسلئے  
سمجھنا چاہئے کہ وہ زیادہ تر اپنے ہی عیب اور پر دھر کر ظاہر  
کرتا ہے \*

B

عدن سے چونکہ دلچسپی کے نئے نئے سامان پیدا ہو گئے تھے  
اسلئے ہم بڑے لطف سے سفر کر رہے تھے، لیکن دوسرے ہی دن  
ایک پرخطر واقعہ پیش آیا جس نے تھوڑی دیر تک مجھکو سخت  
پریشان رکھا۔ ۱۰ مئی کی صبح کرجو میں سوئے سوئے اٹھا تو  
ایک ہمسفر نے کہا کہ جہاز کا انجن ٹوٹ گیا۔ میں نے دیکھا  
تو واقعی کپتان اور جہاز کے ملازم گھبرائے پھرتے ہیں اور اسکی  
درستی کی تدبیر کر رہے ہیں۔ انجن بالکل بیکار ہو گیا تھا اور  
جہاز بالکل آہستہ آہستہ ہوا کے سہارے چل رہا تھا۔ میں گھبرایا  
اور نہایت ناگوار خیالات دل میں آنے لگے۔ اس اضطراب میں  
اور کیا کر سکتا تھا، درزا ہوا مسٹر آرنلڈ کے پاس گیا، وہ اسوقت  
نہایت اطمینان سے کتاب کا مطالعہ کر رہے تھے \*

C

اجنبی شخص کو علماء کے گروہ سے ملنے اور ان سے ربط  
و اختلاط پیدا کرنے کا اس سے زیادہ آسان اور مفید کوئی ذریعہ  
نہیں۔ بڑی خوبی یہ ہے کہ مناظرہ نفسانیت اور ترفع کے لحاظ

سے نہیں ہوتا، بلکہ اثنائے تقریر میں اگر انکو انداز سے معلوم ہو جاتا ہے کہ مخاطب اعتراض سے عہدہ برآ نہیں ہو سکتا تو قصداً دوسرا تذکرہ چھیڑ دیتے ہیں۔ اس قسم کی علمی مجلسیں اس سفر میں میری کامیابی کا بڑا ذریعہ تھیں، اور بعض جگہ تو انہی کی بدولت مجھکو ایسی دشواریوں سے نجات ملی جن سے رہائی کی اور کوئی تدبیر نہ تھی \*

5. (a) Explain the significance of the following :—

5

چھپے رستم - پترے کھولنا - گھر کا بھیدی - اثنائے تقریر - عہدہ برآ ہونا \*

(b) Explain the force of می in the following :—

5

علمی - برائی - دائی - گھڑی - اسی

6. Give a short description of Cyprus as it is given by Shibli in his 12

سفر نامہ.

7. Compare Shibli with Mir Ammān as an Urdū prose writer. 14

8. Translate into simple Urdū :— 20

Muhammad did everything for himself. If he gave an alms, he would place it with his own hand in that of the petitioner. He aided his wives in their household duties, mended his clothes, tied up the goats, and even cobbled his sandals. His ordinary dress was of plain white cotton stuff, made like his neighbours'; but on high and festive occasions he wore garments of fine linen, striped or dyed in red. He never reclined at meals. He ate with his fingers; and when he had finished he would lick them before he wiped his hands. Modesty and kindness, patience, self-denial and generosity pervaded his conduct and riveted the affection of all around him. He disliked to say 'No.' If unable to answer a petitioner in the affirmative he preferred silence.

## HISTORY—HONOURS

<i>Paper-Setters— (Pass and Honours)</i>	{	SIR JADUNATH SARKAR, Kt., C.I.E., M.A.
		PROF. D. R. BHANDARKAR, M.A., Ph.D.
		DR. HEMCHANDRA RAYCHAUDHURI, M.A., Ph.D.
		MR. PRAMATHANATH BANERJEE, M.A., B.L., Barrister-at-Law.
		„ W. C. WORDSWORTH, M.A.
		DR. RAMESCHANDRA MAJUMDAR, M.A., Ph.D.
		( PROF. S. N. SEN, M.A., Ph.D., B.Litt.

## FIRST PAPER

<i>Examiner —</i>	{	MR. KRISHNADHAN BANERJEE, M.A.
		„ P. N. BANERJEE, M.A., B.L., Barrister-at-Law.
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		MR. BIPINBIHARI GUPTA, M.A.
		( „ K. ZACHARIAH, M.A. (Oxon.).

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt FIVE questions only, of which at least ONE must be attempted from EACH of the groups*

*The questions are of equal value*

## GROUP A

1. With the aid of the accompanying sketch-map—  
*Either*, Illustrate how the Peace of Westphalia marked the formation of the modern European system.  
*Or*, Describe the rise and decline of Sweden in the seventeenth century.  
*Or*, Describe the triumphs of Napoleon between 1806 and 1812.
2. 'The revolt against mediaeval restraints upon freedom of thought was commenced by the Italians in this so-called Renaissance; it was completed by the Germans in the Reformation.' Discuss.
3. In what respects did the personal contribution of Martin Luther determine the character of the German Reformation?
4. 'The election of Charles V as emperor in 1519 to succeed Maximilian I involved important consequences not only for Germany but for the whole of Europe.' Discuss.
5. Assess the contributions made by Gustavus Adolphus and Wallenstein to the Thirty Years' War.

## GROUP B

6. 'The peace of Utrecht (1713) has been denounced with greater fervour than any of the great settlements of European affairs except the treaty of Vienna.' Why?

7. 'The keynote of Henry IV's policy was to destroy the Hapsburg supremacy and to establish a new system of European politics of which France should be the centre.' How far was his policy successful, and how far was this policy pursued by Richelieu and Louis XIV?

8. 'Mirabeau said that the great national industry of Prussia was war.' Do his observations apply to the years 1740 to 1815?

9. How far was the Seven Years' War an attempt on the part of Austria and Russia to destroy Prussia? Account for their failure.

10. To what causes do you ascribe the decadence of Spain during the seventeenth century?

## GROUP C

11. 'Montesquieu and Voltaire desired political reforms in the interest of individual liberty, they desired the end of tyranny. Rousseau swept far beyond them. He wished for a total reorganization of Society.' Discuss.

12. Give a critical estimate of the work of the National Convention (1792-95).

13. 'I detest the French Revolution in the act, in the spirit, in the consequence, and most of all in the example.' Do you agree?

14. Give a brief account of Napoleon Bonaparte's first Italian campaign. Do you agree that this campaign constitutes a classic example of the art of war?

15. 'I closed up the chasm of anarchy and put an end to chaos. I cleansed the Revolution from the filth it had accumulated. I ennobled the peoples, I stabilized the throne. I encouraged all those who had talents, rewarded every merit, and widened the boundaries of fame and glory. Consider these claims of Napoleon as a benefactor to posterity.'

16. 'In France,' said Louis Napoleon, 'we make revolutions but not reforms.' Is this a correct reading of the history of France from 1815 to 1875?

## GROUP D

17. 'I say the Empire means France longs for peace, and if France is satisfied, the world is tranquil.' Did Emperor Napoleon III live up to this ideal? If not, why not?

18. What weaknesses were revealed in the Hapsburg Monarchy in 1848? Why did the revolutions of 1848 fail?

19. "Against whom are the Germans fighting?" Ranke was asked in 1870. "Against Louis XIV," was his prompt reply.' Discuss how far Louis XIV's policy was responsible for the Franco-German War.

20. Comment on two of the following:—

(a) 'For subjects to rise against their prince, however wicked or oppressive he may be, is always infinitely criminal. God who has given kings to men, has willed that they should be revered as His lieutenants, and has reserved to Himself alone the right to review their conduct.'

(b) 'The first end of Society is to be governed by authority and not to govern itself. The greatest concern for the majority of every nation is the stability of the laws and their uninterrupted action—not their change. So let governments govern and let them maintain the foundations of their institutions, ancient and modern.'

(c) 'Their Majesties, the Emperor of Austria, the King of Prussia and the Emperor of Russia, solemnly declare their fixed resolution, both in the administration of their respective states and in their relations with every other government, to take for their sole guide the precepts of that Holy Religion, viz.,—Justice, Christian Charity, and Peace.'

(d) 'Not by speeches and majority of votes are the great questions of the day decided—that was the great blunder of 1848 and 1849—but by iron and blood.'

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Examine George III's claim to be regarded as a 'Whig of the Revolution.'
2. Explain the importance of Wilkes' contributions to the cause of English liberty.
3. Should the responsibility for the loss of America be laid entirely at the King's door?
4. To what extent did the legislature reflect national will during the reign of George III?
5. Write a brief essay on the Industrial Revolution.
6. Was the Act of Irish Union a right measure?
7. How did the French Revolution react on English home politics?
8. Was William Pitt essentially a product of his own age?
9. Is it correct to hold that the British empire is the corollary of England's naval supremacy?

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt only SIX questions, two being taken from each group*

*All questions carry equal marks*

### GROUP A.

1. How far is it true to say that 'India possesses a deep underlying fundamental unity that transcends the innumerable diversities of blood, colour, language, dress, manners, and sects'?
2. 'Civilization has always its home in the city.' Does this remark apply to the India of the Mauryas and the Guptas?

3. It has been said that *Aśoka's* inscriptions contain nothing particularly Buddhistic. Do you agree? Give a critical exposition of *Aśoka's Dhamma*.

4. 'For 500 years after Harsha the history of India—even of Hindustān Proper—is either unknown or uninteresting.....The imperial idea does not seem to blossom forth until the throne of the Mauryas and sceptre of the Guptas had passed into the hands of a new race.' To what extent is this remark justified?

5. What is the significance of the rule of the Chalukyas, Pallavas, and Rāshtrakutas in the evolution of Indian culture and religion?

#### GROUP B

6. Attempt a critical estimate of the ideals and methods of Sultan Muhammad bin Tughlaq. What justification is there for regarding him as 'one of the most astonishing kings mentioned in the records of the world'?

7. Discuss the chief effects of the contact of Hindu and Muslim civilisations in India in the fifteenth Century A.D. Refer in this connexion to the parts played by (a) Husain Shah of Bengal, (b) Zainu-l-Ābidin of Kashmir, (c) Iūsuf Adil Shāh of Bijāpur, and (d) Deva Rāya II of Vijayanagar.

8. 'It was the effect of the grace of God that I found no capable minister, otherwise people would have considered that my measures had been devised by him.' Discuss this remark of the Emperor Akbar.

9. Bring out the salient features in the character of the Timurid officials as illustrated by the careers of (a) Mahābat Khān, (b) Murshid Quli Khān, (c) Mir Jumla, and (d) Shāyista Khān.

10. 'The capture and execution of Sambhāji naturally aroused hopes that the Marāṭhā resistance would collapse.' Why were these expectations belied? Do you notice any points of resemblance in the position of the Marāṭhās in 1689 and 1761 respectively?

#### GROUP C

11. Discuss succinctly the rise and fall of the Sultanate of Mysore.

12. Write a critical note on Anglo-Sikh relations in the time of Sir Henry Hardinge and Daulousie. Was the annexation of the Panjāb by the latter 'an act of necessity'?

13. Trace the history of the diffusion of Western education in India and estimate its results.

14. Write a note on the evolution of local self-government in British India.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt only FOUR questions, of which Question 7 MUST be one*

*The figures in the margin indicate full marks*

1. What do you know of the original constitution of the Confederacy of Delos? Explain the following observation in respect of it :—  
'In the constitution there were two defects which were to prove fatal to the success of the League as a union of free and independent allies.' 24

2. Enumerate the successive changes in the Athenian constitution between the Persian and Peloponnesian Wars. 24
3. How far was Pericles responsible for the outbreak of the 'Archidamian War' (481-21 B.C.)? Explain the strategy adopted by him in this war, and comment on the following :—' Geography and man-power forced upon him the strategy of a Frederick; it is idle for critics to demand from him the strategy of a Napoleon.' 24
4. Do the events connected with revolutions at Mytilene and Corcyra affect in any way your estimate of Greek civilization and democratic form of government? 24
5. ' Alcibiades was qualified by training as well as by inheritance to become a great force in the public life of Athens; but that it should be an incalculable force was certain.' Explain and test the truth of the above view by specific examples. 24
6. ' If Athens was the school of Greece, she was a hard school and taught much that was evil. It is not easy to forget the cost to Greece of all this greatness, or the justice of the nemesis that struck Athens down.' Discuss. 24
7. Write a short essay on *one* of the following subjects :— 28
  - (a) Greek architecture and sculpture in the fifth century B.C.
  - (b) Attic drama in the fifth century B.C.
  - (c) Legislation and administration of justice in Athens.
  - (d) The Sophists.

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### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer six questions*

*Credit will be given for sketch-maps*

1. Describe the political organization of Italy and Sicily at the outbreak of the First Punic War.
2. How was the Roman army recruited and organized at the end of the third century B.C.?
3. Discuss the Roman road system in Italy, and show its importance in the history of the peninsula.
4. On what occasions during the Punic Wars did Rome make herself anything of a sea-power?
5. ' Rome looked naturally westward rather than eastward.' Discuss this in reference to the history of your period.
6. How did Rome adapt her constitution to the ruling of an overseas empire?
7. Give a brief account of the Roman conquest of Greece. How was Greece organized as a part of the empire?
8. Write brief notes on *four* of the following :—the Mamertines, the Metaurus, Hiero, Capua, M. Porcius Cato, Masinissa, Colonia, Perseus, the three fetters of Greece, Magnesia ad Sipylum, Viriathus.
9. Discuss Hannibal's advantages and disadvantages in his attack on the Roman power.



## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer Question 9 and any FOUR of the rest*

*The questions are of equal value*

1. Write short historical notes on—legislation of Justinian, Exarch, the Albigensian heresy, the fall of Roderick (the last of the Visigoths), the Investiture dispute, Arnold of Brescia.

2. Describe the extent of Charlemagne's empire and its administrative organization. How was his heritage broken up, and with what consequences to the races in it?

3. Trace in outline the steps by which France was formed into one kingdom. What were the effects of the Hundred Years' War on that country?

4. Explain the services of Henry I and Henry II of England to the growth of monarchy and national union in that country.

5. Sketch the constitution of the republic of Florence, and describe the life and position of (a) the nobility, and (b) the artisans there.

6. Wherein did English feudalism differ from continental feudalism? What were the good effects of feudalism as an institution?

7. Write a history of Germany under Frederick Barbarossa, dwelling in some detail on his foreign policy and its effect.

8. Account for the fall of the Christian kingdom of Jerusalem. What were the lasting effects of the Crusades on Europe?

9. 'The two great ideas which expiring antiquity bequeathed to the ages that followed were those of a World-Monarchy and a World-Religion' (BRYCE). Discuss.

## HISTORY—PASS

Examiners—	{	MR. INDUBHUSHAN BANERJEE, M.A.
		„ NARAYANCHANDRA BANERJEE, M.A.
		„ ATALBIHARI BHATTACHARYYA, M.A.
		„ BHUPENDRANATH CHAKRABARTI, M.A.
		„ TRIPURARI CHAKRABARTI, M.A.
		„ HARENDRACHANDRA CHANDA, M.A.
		DR. NRIPENDRAKUMAR DATTA, M.A., Ph.D.
		„ KISORIMOCHAN GUPTA, M.A., Ph.D.
		MR. SURENDRACHANDRA MAJUMDAR, M.A.
		„ MAHENDRALAL SARKAR, M.A.
		„ BHUBANMOHAN SEN, M.A.
		„ DEBENDRANATH SEN, M.A.
		„ BIJAYCHANDRA SENGUPTA, M.A.
		„ JATINDRANATH SIKDAR, M.A.
		„ NIMAICHAND SIL, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer SIX questions only, THREE to be taken from each group*

*The questions are of equal value*

## GROUP A

1. What were the leading factors of the civilization of the Renaissance?
2. Explain the causes and the consequences of the Thirty Years' War.
3. Indicate the place of Richlieu in the history of his country.
4. Sketch the career of Solyman the Magnificent.
5. Write an account of the expansion of Russian power under Peter the Great.
6. Do you hold Charles XII responsible for the down fall of Sweden?
7. Draw a sketch-map of Europe in the year 1713.

## GROUP B

8. Can you justify the first and second partitions of Poland?
9. What do you mean by the 'Diplomatic Revolution'? How did it affect the political balance of Europe?
10. Critically discuss the causes of the French Revolution.
11. Why did the Holy Alliance fail?
12. Briefly narrate the history of the unification of Italy.
13. How did Greece achieve her independence?
14. Indicate the services of Bismarck to Prussia and Germany.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any SIX questions*

*The questions are of equal value*

1. *Either*, Draw a sketch-map of England and illustrate the Industrial Revolution.

*Or*, Draw a sketch-map of Europe in 1812 and illustrate Napoleon's triumph.

2. 'George III's resolve was to govern, not to govern against law but to be freed from the dictation of parties and ministers and to be in effect the first minister of the state.' How far did George III succeed and why?

3. Give a brief account of the ministry of Lord North (1770-1778).

4. 'Fox is the founder of the party of Holland, Grey, Melbourne, and Palmerston; Pitt is the creator of the Toryism of Castlereagh, Canning, Wellington, and Peel.' Discuss.

5. What led to the revolt of the American colonies against England? Why did England fail in suppressing the revolt?
6. 'The Seven Years' War is a turning-point in British national history and it is a turning-point in the history of the world.' Explain.
7. Write a brief account of England's policy towards Ireland (1792-1801).
8. How far is it true to say that the back eddies of the French Revolution swept England into reaction?
9. Discuss Pitt the Younger as (a) a finance minister, (b) a war minister.
10. Write notes on any one of the following :—(a) Pope : *Dunciad*, (b) Adam Smith : *Wealth of Nations*, (c) Burke : *Reflections on the French Revolution*, (d) Paine : *Rights of Man*.

### THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Six questions to be attempted. From each section at least  
ONE question should be answered*

*The questions are of equal value*

#### A

1. Analyse the nature of the civilization at the close of the fourth century B.C.
2. Describe Aśoka as a ruler and missionary.
3. 'Samudra Gupta, the second Gupta monarch, was one of the most remarkable and accomplished kings recorded in Indian History.' Discuss.
4. Describe the political condition of Northern India on the eve of the Muhammadan invasion.

#### B

5. Narrate briefly the origin, rise, and fall of the Kingdom of Vijayanagar.
6. Why is Alauddin Khilji considered 'one of the best Sultans'?
7. Whom do you think to be the best of the Mughal kings—Akbar or Aurangzeb? Give reasons.
8. Give a brief account of the early Sikh Gurus.
9. To what main causes do you ascribe the failure of the French to establish an empire in India?
10. Trace the evolution of the administrative system in India under the East India Company from 1765 to 1773.
11. 'Lord Wellesley was a statesman rather than an administrator, concerned chiefly with matters of high policy.' Discuss.
12. What are in your opinion the causes and after-effects of the Mutiny of 1857?

## ECONOMICS—HONOURS

<i>Paper-Setters— (Pass and Honours)</i>	{	PROF. PRAMATHANATH BANERJEA, M.A., D.Sc., Barrister-at-Law.
		MR. SATISCHANDRA RAY, M.A.
		DR. J. P. NIYOGI, M.A., Ph.D.
		MR. MOHITKUMAR GHOSH, M.A. (Cal.), B.Com. (Lond.).
		„ DEBENDRANATH BANERJEE, M.A.
		SIR J. C. COYAJEE, Kt., B.A., LL.B.
		MR. R. N. GILCHRIST, M.A.
		„ W. C. WORDSWORTH, M.A.
		„ DWARKANATH GHOSH M.A. (Cal.),
<i>Examiners—</i>	{	PROF. PRAMATHANATH BANERJEA, M.A., D.Sc., Barrister-at-Law.
		MR. DURGAGATI CHATTORAJ, M.A.
		„ JOHN KELLAS, M.A.
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		„ JOGISCHANDRA SINHA, M.A., Ph.D.
		MR. W. C. WORDSWORTH, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Discuss the nature and estimate the importance of the principle of joint costs. How far is it possible to isolate the costs of production of joint products?

2. Indicate the manner in which the principle of substitution operates in the organization of industry. How does this principle apply to employers themselves?

3. Examine the chief points of resemblance and contrast between rent, quasi-rent, and interest. Would you advocate the control of rent and interest by legislation?

4. To what extent is it desirable and practicable to modify the distribution of the national dividend in a modern industrial community by conscious social action?

5. In what different ways may two or more metals be combined in a currency system?

6. What is meant by a gold standard?

'The mere existence of an international gold standard does not guarantee stability of prices as a whole either over space or over time.' Elucidate this statement.

7. Discuss some of the difficulties in the way of the maintenance of a great industrial combination.

8. Consider the effect on the volume of unemployment in this country of the imposition of a prohibitive import duty on all foreign imports.

9. Examine the analogies between international and domestic trade.

10. What are the objects for which bank reserves are held? Discuss the merits of the various ways by which the banks of different countries protect their reserves.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Mill says—'No democracy, nothing but a false show of democracy, is possible unless the minorities are adequately represented.' Critically develop this proposition.

Criticize the system of representation by classes or interests.

2. Of all the Second Chambers you have studied, the French Senate is probably the weakest and the American Senate the strongest. State the reasons.

3. In practice there is no state in which the sphere of the executive power is wholly separate from, or independent of, the legislative power. Give reasons, with examples.

4. What do you understand by the Sovereign power in a State? Is it in any sense restricted by internal or external limitations?

5. Explain what is meant by political self-determination. Examine the consequences of an extreme and logical application of this doctrine.

6. The position and powers of the German President are midway between those of the French and the American. Explain.

7. Discuss the powers, position, and the constitutional necessity of the Supreme Court of the United States.

8. The legislature of a country controls the administration, which is also an agency for assisting the legislature.

Explain how this control is exercised and how this assistance is rendered.

9. Analyse briefly the merits and defects of aristocracy. What are its dangers?

10. Critically discuss the proposition that the government should be based on the consent of the governed.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer SIX questions only*

*The questions are of equal value*

1. Give a short history of income tax in India, and examine the arguments for taxing incomes from land.
2. 'There is nothing to warrant the contention, frequently made, that the Indian economic structure is the only one of its kind and outside the pale of ordinary economic laws.' Discuss.
3. What are the arguments for State management of railways in India?
4. Give a brief account of labour legislation in India during the last decade.
5. Discuss the difficulties experienced by Indian industrialists in obtaining financial facilities for their enterprises. How far does the managing agency system solve these difficulties?
6. What have been the obstacles to the development of a stable industrial population in India? To what extent is instability here a good thing for the country at large?
7. Has the recent large export of gold from India for sale abroad been beneficial to the country? Give reasons for your answer.
8. Give some account of India's paper currency and explain how it is regulated.
9. Describe the industrial organization of Bengal, indicating the location of the various industries and the sources of the labour supply.
10. Explain the economic importance of the monsoon to India.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. 'Money is only one of many economic things. Its value therefore is primarily determined by exactly the same two factors as determine the value of any other thing' (ROBERTSON).  
In the light of this statement do you think that there is any need for a separate theory of the value of money?
2. If the efficiency of all Indian labour were doubled, that of foreign labour remaining the same, what would be the effect on our imports and exports?
3. 'Gambling is speculation, but speculation is not necessarily a gamble.' Discuss.
4. Discuss the various difficulties that arise in connexion with the measurement of changes in the value of money.
5. Should an income-tax be proportional or progressive? State clearly the reasons for your answer.

6. In what circumstances, if any, is a Government justified in subsidizing particular branches of production?

7. Discuss whether it is equitable that all classes of the population should contribute something to the tax revenue of the country.

8. Give a brief analysis of a trade cycle.

9. How far is purchasing power parity a satisfactory index of exchange variations?

### FIFTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Any FIVE questions to be answered*

*The questions are of equal value*

1. Comment on the following statement :—

'The *Politics* would not be so valuable as they are if they expressed the views of an individual man of genius and nothing more. Here, as elsewhere, it is not the least of Aristotle's merits that he epitomized the best thoughts of a nation and of a stage in human history.'

2. Examine Aristotle's grounds for discussing the management of the household before proceeding to deal with the state.

3. Write a short essay on Aristotle's views on private property, with particular reference to his criticism of the ideas of Plato and Phaleas of Chalcedon.

4. Give Aristotle's views on the causes of revolution. What, in his opinion, are the best precautions against revolution?

5. What, according to Aristotle, are the main types of democracy? Compare his views on manhood suffrage with those of J. S. Mill.

6. Examine J. S. Mill's views on the rights of nationalities.

7. Give J. S. Mill's views on the organisation of the executive in a democratic form of government.

8. What are the basic principles which, in J. S. Mill's view, should underlie the constitution of local representative bodies? How far, in your opinion, are these principles observed in his sketch of the machinery of local government?

9. Examine J. S. Mill's views on the mode of voting.

### SIXTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Write an essay on any one of the following subjects :—

100

(a) The Indian Round Table Conference.

(b) The present trade depression in India.

(c) Socialism and Capitalism : their respective merits and defects.

(d) The cottage industries of Bengal.

## ECONOMICS—PASS

<i>Examiners—</i>	{	MR. JITENDRACHANDRA BANERJEE, M.A.
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„ BIJAYKUMAR SARKAR, A.B.

„ SATISCHANDRA SEN, M.A.

„ DHIRENDRANATH SENGUPTA, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any SIX questions*

*The questions are of equal value*

1. Discuss the claims of Economics to be regarded as a science.
2. Indicate and compare the principles which determine exchange-value under (a) competition, and (b) monopoly.
3. Discuss the advantages and weak points of (a) joint-stock companies, and (b) co-operative associations as systems of business management.
4. 'It makes really no difference whether we say that interest is the measure of marginal productivity or the measure of marginal forbearance' (SELIGMAN). Explain and comment on this proposition.
5. Describe the conditions favouring a general high level of wages for all classes of workers in any country.
6. 'The quantity theory is only an elliptical way of stating the ordinary laws of demand and supply.' Explain this statement.
7. Discuss the various factors which influence the discount rate. What is the relation between the discount rate and the general interest rate?
8. Indicate the objects for which bank reserve are held. Discuss the merits of the various ways by which the banks of different countries protect their reserves.
9. Examine the validity of the two following propositions :—  
(a) 'Profits tend to an equality.'  
(b) 'Profits tend to a minimum.'
10. Discuss the scope as well as the limitations of Trade Union action for raising wages.



## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any SIX questions*

*The questions are of equal value*

1. 'History without political science has no fruit; and political science without history has no root.' Discuss this statement.
2. Discuss the constituent factors of nationality. To what extent do such factors exist in India?
3. What is meant by the organic theory of the State? Discuss the practical value of the theory.
4. Discuss the characteristics of Sovereignty. Are the Indian States and the British Dominions sovereign? Give reasons for your answer.
5. Estimate the strength and weakness of democracy as a form of government.
6. Do Upper Chambers serve any useful purpose? Would you like to have an Upper Chamber for Bengal in the proposed new constitution of India? Give reasons for your answer.
7. Describe, with reference to the constitutions of England and France, the salient features of the Cabinet system of government.
8. Compare the constitutional powers of the President of the United States of America with those of the British Prime Minister.
9. Examine the position and powers of ministers in an Indian province under the existing constitution of the country.
10. Discuss the relation of the Governor-General in Council with the Secretary of State for India.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*The questions are of equal value*

1. Discuss the economic advantages and disadvantages of the caste system in India.
2. Discuss the forest policy of the Government of India. Examine the importance of forests in the economic life of the nation.
3. Examine the causes and effects of rural indebtedness in Bengal. Discuss the steps taken by the State to afford relief to the indebted agriculturists.
4. Write a short note on any one of the following :—  
(a) Sources of power and their utilization in India.  
(b) Foreign capital in India.
5. Examine the arguments for and against the State management of railways in India.
6. Describe the measures taken by the Government to protect the interests of tenants in Bengal.
7. Describe the main features of the Gold Exchange Standard. Show how it differs from the Gold Bullion Standard.
8. Discuss the effects of a policy of protection on Indian industry. How does such a policy affect the agricultural population of this country?
9. Describe the main features of the Indian banking system.
10. Describe the chief sources of revenue and the main heads of expenditure of the Central Government in India.

## PHILOSOPHY—HONOURS

<i>Paper-Setters— (Pass and Honours)</i>	{	DR. SUSILKUMAR MAITRA, M.A., Ph.D.
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		PROF. SIR S. RADHAKRISHNAN, Kt., M.A., D.Litt.
		RAI BAHADUR KRISHNACHANDRA BHATTACHARYYA, M.A.
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		„ PRABHU DUTT SASTRI, M.A., Ph.D.
		MR. ROY ROWLAND THOMAS, M.A.

## FIRST PAPER

## Psychology

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Distinguish psychology from logic and epistemology, and indicate the place of psychology among the philosophical sciences.
2. Draw a reflex arc, and explain it carefully.  
How is reflex action distinguished from instinctive action and emotional expression?
3. Represent the relations of the various colour sensations by a diagram which you consider to be the most satisfactory, and explain the relations as indicated in the diagram.
4. How is the third dimension perceived by the two eyes? Discuss how far depth can be perceived by monocular vision.
5. Distinguish any *three* of the following, with illustrations:—primary memory image, dream image, eidetic image, recurrent image, hallucination, pseudo-hallucination.
6. How is thought related to language?  
Can there be imageless thinking? Discuss the question by reference to appropriate examples.

7. Analyse desire by reference to a concrete case.  
Is there any such thing as unconscious desire? If so, illustrate some of its manifestations.
8. Bring out the distinctive features of the following by reference to apt illustrations;—sense-feeling, emotion, sentiment, mood.
9. (a) Analyse the process of deliberation.  
(b) Indicate the limits of self-control.
10. Expound critically any *two* of the following :—
  - (a) James's theory of the stream of consciousness.
  - (b) Stout's view of the nature of instinct.
  - (c) Müller's theory of the specific energy of nerves.
  - (d) McDougall's theory of the relation between instinct and emotion.
  - (e) Herbert Spencer's theory of pleasure and pain.

## SECOND PAPER

### Ethics

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Explain the relation of ethics to psychology.
2. Explain the relation of ethics to metaphysics. Do you consider a metaphysical foundation essential to a satisfactory system of ethics? Discuss the question.
3. Explain the relation of ethics to religion, with special reference to the following points :—
  - (a) The ethical consciousness as the starting-point of religion.
  - (b) Religion as the crown and completion of the ethical consciousness.
4. Distinguish motive and intention, and consider which of them is the precise object of the moral judgment. Examine the views of intuitional and utilitarian ethics on this question.
5. In what different ways has moral obligation been accounted for? What is your own view on the subject, and on what grounds do you hold it?
6. Explain and examine the theory of the highest good as pleasure.
7. What is your conception of moral progress? Can the moral develop out of the non-moral? In what directions has morality actually progressed?
8. What different views have been held as to the origin of the moral faculty? Is conscience always and necessarily infallible? Discuss the question.
9. How far is a young man justified in disobeying his parents in order to obey what he sincerely believes to be the call of his country? Discuss the question with reference to the views of the different schools of ethical thought.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Explain and examine Kant's view of the relation between epistemology and metaphysics.
2. The extra-mental object is sometimes said to be inferred from the mental object or idea. Is the inference possible and is it necessary to admit the idea at all?
3. In what sense is the object taken by Kant to be constructed by the knowing activity? Is his view of the thing-in-itself tenable?
4. Discuss the conception of substance (a) as a mere sum of attributes, (b) as their unknown underlying unity, (c) as their known comprehensive unity.
5. If space is objective, is it thing or attribute or relation? Is it correct to say that the knowledge of space and the knowledge of time presuppose each other?
6. The mechanistic interpretation of life is inadequate and the teleological interpretation is over-definite. Examine this statement.
7. How, if at all, do we know the Subject as distinct from the mental states?
8. Present the case for and against the theory of an indeterministic freedom of the will.
9. Can the notions of Absolute spirit and of personal God be reconciled?

## FOURTH PAPER

## Natural Theology

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Examine the definition of Religion as 'morality touched with emotion.' State your own definition of Religion, and discuss in its light the validity of the remark that 'Religion contains the ideal ground of Morality and Morality the real manifestation of Religion.'
2. 'Science deals simply with what happens and the ways in which it happens: and only where it ends can Ethics and Theology begin, which deal with what ought to be and eternally is in the living Archetype and End of all perfection.' Discuss this statement fully, and state your own view of the relation between Religion and Science.
3. Examine the claims of the Science of Religion as well as Comparative Religion in determining the essential character of Religion.

4. State wherein you discover the originality of the religious consciousness, and justify it with reference to your analysis of the religious sentiment. Discuss in this connexion the validity of the contention: 'what we worship, that is God.'

5. Give a critical exposition of the argument from the 'contingency of the world' (*a contingentia mundi*) to the idea of God as a Necessary Being. Examine critically the claim that 'the argument is not so much "Because the contingent is, therefore the necessary being is"; it is, rather, "Because the contingent is not, the necessary being is."'

6. Expound fully the argument from design in its bearing on the idea of God, and examine in this regard the force of the objection that 'the world exhibits adaptation but not necessarily design.'

7. Determine the Moral attributes of God as distinguished from the Natural. On what grounds would you justify the inseparability of the attributes of God as Cause and God as Perfection?

8. Explain and examine the statement that 'the idea of creation tends to pass into that of manifestation—not the making of something out of nothing, but the revelation in and to finite spirits of the infinite riches of the divine life.'

9. Attempt a critical estimate of the 'Religion of Humanity; and the worship of the Unknowable as complementary half-truths,' and show, that the one presents a supreme moral ideal without a metaphysical ground, and the other an ultimate metaphysical principle without a final moral purpose.

## FIFTH PAPER

### History of Philosophy

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Examine critically the value of the ontological argument as formulated by Descartes.

2. The history of modern philosophy may be regarded as a criticism of the category of substance. Illustrate this statement by a reference to the views of either Descartes and Spinoza or of Locke and Kant.

3. Give a critical exposition of Spinoza's theory of Knowledge, with special reference to his theory of intuition.

4. Do you agree with Locke's criticism of the theory of innate ideas?

5. Give a brief outline of Leibniz's theory of the unconscious. What is its relation to Leibniz's general metaphysics?

\* 6. Is it fair to characterize Berkeley's general philosophical position as one of spiritual realism?

7. Compare the views of Locke, Berkeley, and Hume on the question of abstract ideas.

8. How does Hume account for the feeling of personal identity? Is his view psychologically sound?

9. Give a critical account of Kant's theory of space.

10. Examine the difference between Kant and Berkeley on the status of the objective world.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer Question 6 and any two of the rest*

*The figures in the margin indicate full marks*

1. Examine Berkeley's claim to be the philosopher of common sense. 25
2. How does Berkeley deal with the objection that by his immaterialism 'all that is real and substantial in nature is banished out of the world, and instead thereof a chimerical scheme of ideas takes place'? 25
3. What are the reasons for the distinction between the primary qualities and the secondary qualities of things? On what grounds does Berkeley reject this distinction? What is the ultimate conclusion to which he is led? 25
4. Explain clearly Berkeley's distinction between spirits, ideas, and relations. 25
5. State Berkeley's reasons for the conclusion that ideas cannot be regarded as copies of things. 25
6. Write an essay on any one of the following subjects :— 50
  - (a) The fallacies of materialism.
  - (b) Is man's survival of bodily death credible?
  - (c) The necessity of religion.
  - (d) Order and progress.
  - (e) The meaning and conditions of self-realization.
  - (f) Why study philosophy?

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 PHILOSOPHY—PASS

MR. KANAILAL BANERJEE, M.A.  
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 DR. NALINIKANTA BRAHMA, M.A., Ph.D.  
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 MR. KALIDAS SEN, M.A.

## FIRST PAPER

## Psychology

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any SIX questions*

*The questions are of equal value*

1. Do you consider the knowledge of psychology to be necessary to the study of philosophy? Give reasons for your answer.
2. Explain and illustrate :—consciousness of object, consciousness of psychical states, consciousness of self.
3. What are the physiological concomitants of conscious states? What are the limits of the physiological explanation of mental phenomena?
4. What are the different classes of mental phenomena, and in what sense may we speak of these classes as different? Examine the position of the Faculty of Psychology in this connexion.
5. While writing your answers, you are conscious of a fly sitting on your face. How do you come to know that (a) it is a fly sitting, (b) that it is sitting on your face?
6. How does a *percept* differ from an *image*? How do you account for (a) the sense of reality attaching to dream-objects in the dream-state, (b) the sense of unreality attaching thereto in the waking state?
7. Distinguish between *reverie*, *artistic creation*, and *scientific discovery* as modes of imaginative activity.
8. A train of reasoning is described as a sequence of ideas determined by association. Explain.
9. Analyse the following :—
  - (a) Fear of ghosts in children
  - (b) Fear of death.
  - (c) The miser's love of money.
  - (d) Love of power.
10. *Either*, Write short notes on :—the practical man, the man of strong will, the sentimentalist, the unpractical idealist.  
*Or*, Explain the nature and characteristics of reflex, instinctive, and habitual actions.

## SECOND PAPER

## Ethics

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any SIX questions*

*The questions are of equal value*

1. Define the term science, and discuss the question whether 'Ethics' may rightly be called a science.
2. Discuss the morality or the opposite of the following acts :—
  - (a) A surgical operation that fails and kills the patient.
  - (b) A murder that is committed in the belief that it will bring political freedom to the country.

3. What place would you assign to pleasure in the organisation of the moral life? Would you distinguish between the greatest and the highest pleasure? If so, on what grounds?

4. Write short explanatory notes on :—

- (a) Thou oughtst, . . thou canst.
- (b) Die to live.

5. What is your idea of a perfect life? Is there a life 'beyond good and evil'?

6. What are the 'rights of man'? Does 'might' create 'rights'? Give reasons for your answer.

7. Analyse the consciousness of moral obligation. Do you agree with the view that the sense of obligation is an offshoot of the experience of social discipline?

8. Is morality possible without religion? Give reasons for your answer.

9. Explain the nature of moral judgment. Discuss whether the *motive* or *intention* is the precise object of moral judgment.

10. Explain and examine any *two* theories of moral obligation.

### THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. What is philosophy? How is it related to science? In what sense can we define philosophy as the 'science of sciences'?

2. 'There is nothing in intellect which was not in sensation, except the intellect itself.' Develop fully the implications of this statement for a theory of the origin of knowledge.

3. What do you understand by 'causality' as a category of knowledge? What is its real nature as an objective fact?

4. Explain and examine the following statements :—

- (a) The real is independent of all minds.
- (b) The real has no existence apart from mind.

5. Discuss fully the different theories as to the nature and origin of species.

6. Expound the concept of 'personality' and show what light it throws on the distinction between the empirical and the noumenal selves.

7. What do you understand by God as the Absolute? Does God's absoluteness leave any room for man's individuality and freedom?

8. State and examine the main grounds for a belief in the future life of the individual self.

9. Distinguish between deism, theism, and pantheism, and estimate their value as religious theories.

10. Explain and examine Hume's theory of causality and compare it with that of Kant.



# B.A. and B.Sc. Examinations, 1933

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## MATHEMATICS—HONOURS

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 { „ BHUPATIMOHAN SEN, M.Sc., M.A. (CANTAB.).  
 { DR. INDUBHUSHAN BRAHMACHARI, M.A., PH.D.

### FIRST PAPER

*Candidates are required to give their answers in their own  
words as far as practicable*

SEVEN questions to be attempted of which at least two  
should be from GROUP B

*The questions are of equal value*

### GROUP A

1. (i) Find the limits to the real values of  $x$  and  $y$  which can satisfy the equation

$$x^2 + 12xy + 4y^2 + 4x + 8y + 20 = 0.$$

(ii) If  $y^2 + 2y = x(y + 1)$ ,  
show that one value of  $y$  is

$$\frac{1}{2}x + \frac{1}{8}x^2 - \frac{1}{16}x^4 + \dots$$

Is there any restriction on the value of  $x$ ?

2. (i) Prove that the value of the expression

$$\left(1 + \frac{x}{n}\right)^n$$

increases with  $n$ ,  $n$  having positive values and  $x$  being a fixed positive quantity less than  $n$ .

- (ii) If  $a, b, c$  be positive and not all equal, show that the expression  
 $a^n(a-b)(a-c) + b^n(b-c)(b-a) + c^n(c-a)(c-b)$   
 will be positive for all integral values of  $n$ , and for the values 0 and -1.  
 (iii)  $n$  being a positive integer, show that

$$\left(\frac{n+1}{2}\right)^n > n! > n^{\frac{n}{2}}.$$

8. (i) Prove that the series  $\sum u_n$  is convergent or divergent according as

$$\lim_{n \rightarrow \infty} \left[ \left\{ n \left( \frac{u_n}{u_{n+1}} - 1 \right) - 1 \right\} \log n \right] > 1, \text{ or } < 1.$$

- (ii) Discuss the convergence of the hypergeometric series

$$1 + \frac{\alpha \beta}{1 \cdot \gamma} x + \frac{\alpha(\alpha+1)\beta(\beta+1)}{1 \cdot 2 \cdot \gamma(\gamma+1)} x^2 + \frac{\alpha(\alpha+1)(\alpha+2)\beta(\beta+1)(\beta+2)}{1 \cdot 2 \cdot 3 \cdot \gamma(\gamma+1)(\gamma+2)} x^3 + \dots$$

Examine the case  $x=1$ .

- (iii) Test for convergence the series

$$\frac{m}{n} + \frac{m(m+1)}{n(n+1)} + \frac{m(m+1)(m+2)}{n(n+1)(n+2)} + \dots$$

4. (i) If  $\frac{p_n}{q_n}$  be the  $n$ th convergent to a simple continued fraction, show

that the error in approximating to the continued fraction by  $\frac{p_n}{q_n}$  lies between

$\frac{1}{q_n^2}$  and  $\frac{1}{2q_{n+1}^2}$ . Which convergent will be a comparatively good approximation to the continued fraction?

- (ii) If  $\frac{p_n}{q_n}$  be the  $n$ th convergent to

$$\frac{1}{a+} \frac{1}{a+} \frac{1}{a+} \dots,$$

show that  $p_n, q_n$  will be the coefficients of  $x^{n-1}$  and  $x^n$  respectively in the expansion of  $(1-ax-x^2)^{-1}$ .

5. (i) Sum the following series :

$$(1) \frac{1}{(1-x)(1-x^2)} + \frac{x^2}{(1-x^2)(1-x^3)} + \frac{x^4}{(1-x^3)(1-x^4)} + \dots$$

to an infinite number of terms, when  $x < 1$ .

$$(2) \frac{1}{2.4} + \frac{1.8}{2.4.6} + \frac{1.8.5}{2.4.6.8} + \dots \text{ to } n \text{ terms.}$$

- (ii) Find the generating function of the recurring series

$$1+8x+4x^2+8x^3+12x^4+20x^5+\dots$$

6. (i) If  $A$  and  $B$  are two determinants whose typical elements are  $a_{ik}$  and  $b_{ik}$  respectively, and  $P$  be the product determinant  $AB$ , whose typical element is  $p_{ik}$ , then

$$P_{ik} = \sum_m a_{im} b_{mk}.$$

Prove this for a three-rowed square determinant.

(ii) If  $\omega$  be one of the imaginary cube roots of unity, show that

$$\begin{vmatrix} \omega^3 & \omega^3 \\ \omega^3 & 1 \\ 1 & \omega \\ \omega & \omega^2 \end{vmatrix} = 3\sqrt{-3}.$$

### GROUP B

7. Assuming that the algebraic equation of the  $n$ th degree  $f(x)=0$  possesses one root, show that it has  $n$  roots. How would you find an upper limit to the number of real negative roots of this equation?

Show that the equation

$$x = a + \frac{A^2}{x-a} + \frac{B^2}{x-b} + \dots + \frac{P^2}{x-p}$$

cannot have an imaginary root, the constants being all real numbers.

8. (i) Show that the solution of the biquadratic equation can be made to depend on the solution of a cubic equation (Euler's cubic), and also (1) when the roots of the biquadratic are all real, the roots of this cubic are all real and positive, (2) when the roots of the biquadratic are all imaginary, the roots of this cubic are all real, two being negative and one positive, (3) when the biquadratic has two real and two imaginary roots, the cubic has two imaginary roots and one real positive root.

(ii) Solve the equation

$$x^3 - 7x^2 + 20x - 24 = 0,$$

being given that it has a pair of roots of the form

$$a \pm a\sqrt{-1}.$$

9. (i) Prove that the equation

$$x^5 + 5ax^3 + 5a^2x + b = 0,$$

has a pair of equal roots when  $b^2 + 4a^5 = 0$ ; and when it has one pair of equal roots it must have a second pair.

(ii) Examine if the equation

$$x^4 - 5x^3 + 3x^2 + 35x - 70 = 0$$

has roots between  $-3$  and  $3$ , and if so, locate them (giving the consecutive integers within which they lie).

10. Calculate to three places of decimals the negative root of the equation

$$x^4 - 12x^2 + 12x - 3 = 0.$$

11. (i) Analyse by means of Sturm's functions, or otherwise, the equation

$$x^4 - 4x^3 - 3x + 23 = 0$$

to find the nature of its roots and to locate them when they are real.

(ii) Find the sum of the fourth powers of the roots of

$$x^3 + qx + r = 0.$$

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only SIX questions to be attempted, THREE from each group*

*The questions are of equal value*

## GROUP A

1. If  $\tan \frac{\theta}{2} = \tan^3 \frac{\phi}{2}$ , and  $\tan \phi = 2 \tan \alpha$ , show that  $\theta + \phi = 2\alpha$ .

Prove that if

$$\frac{1 - \tan B \tan C}{\cos^2 A} + \frac{1 - \tan C \tan A}{\cos^2 B} = 2 \frac{1 - \tan A \tan B}{\cos^2 C},$$

either  $\tan A, \tan C, \tan B$  are in A.P., or  $A+B+C$  is an integral multiple of  $\pi$ .

2. Eliminate  $\theta$  and  $\phi$  from the equations

$$\frac{x}{a} \cos \theta + \frac{y}{b} \sin \theta = 1,$$

$$\frac{x}{a} \cos \phi + \frac{y}{b} \sin \phi = 1,$$

$$\frac{\cos \theta \cos \phi}{a^2} + \frac{\sin \theta \sin \phi}{b^2} = 0.$$

Solve the equation

$$\theta = \tan^{-1}(2 \tan^2 \theta) - \frac{1}{2} \sin^{-1} \left( \frac{3 \sin 2\theta}{5 + 4 \cos 2\theta} \right).$$

3. If the distance between the orthocentre and the centre of the circumcircle of a triangle is  $\frac{a}{2}$ , show that the triangle is right-angled or else  $\tan B \tan C = 9$ .

If  $x, y, z$  be the distances between the centres of the escribed and inscribed circles of a triangle and if  $d$  be the diameter of the circumcircle, show that

$$xyz + d(x^2 + y^2 + z^2) = 4d^3.$$

4. Given  $\tan(x + iy) = \sin(u + iv)$ , show that  $\coth v \sinh 2y = \cot u \sin 2x$ .

$$\text{If } u = \log e \tan \left( \frac{\pi}{4} + \frac{x}{2} \right) = x + a_1 x^3 + a_2 x^5 + \dots,$$

prove that  $\coth u = \sec x$ ; and hence or otherwise show that

$$u = x - a_1 x^3 + a_2 x^5 - \dots$$

5. Show that

$$\frac{\sin m\theta}{\sin \theta} = m - \frac{m(m^2-1^2)}{3!} \sin^2 \theta + \frac{m(m^2-1^2)(m^2-3^2)}{5!} \sin^4 \theta - \dots \&c.,$$

where  $m$  is not an integer and

$$-\frac{\pi}{2} < \theta < \frac{\pi}{2}.$$

Prove that

$$\sec \theta = 1 + \frac{1}{2} \sin^2 \theta + \frac{1 \cdot 3}{2 \cdot 4} \sin^4 \theta + \dots$$

6. Given that

$$\cos x = \left(1 - \frac{4x^2}{\pi^2}\right) \left(1 - \frac{4x^2}{9^2\pi^2}\right) \left(1 - \frac{4x^2}{25^2\pi^2}\right) \dots,$$

obtain the corresponding formula for  $\sin x$ .

Show that

$$\frac{\sin \theta}{\theta} = 1 - \frac{1}{\pi^2} \frac{\theta^2}{1^2} + \frac{1}{\pi^4} \frac{\theta^2(\theta^2 - \pi^2)}{1^2 \cdot 2^2} - \frac{1}{\pi^6} \frac{\theta^2(\theta^2 - \pi^2)(\theta^2 - 2^2\pi^2)}{1^2 \cdot 2^2 \cdot 3^2} + \dots,$$

and deduce that

$$\frac{1}{1^2} \cdot \frac{1}{2^2} + \left(\frac{1}{1^2} + \frac{1}{2^2}\right) \frac{1}{3^2} + \left(\frac{1}{1^2} + \frac{1}{2^2} + \frac{1}{3^2}\right) \frac{1}{4^2} + \dots = \frac{\pi^4}{120}.$$

## GROUP B

7. Show that the curve given by the equations

$$x = a_1 t^2 + b_1 t + c_1,$$

$$y = a_2 t^2 + b_2 t + c_2,$$

where  $t$  is a variable parameter, is a parabola whose latus rectum is

$$\frac{(a_1 b_2 - a_2 b_1)^2}{(a_1^2 + a_2^2)^{\frac{3}{2}}}.$$

When does this curve become two coincident straight lines?

8. If any two chords are drawn through two points on the major axis of an ellipse equidistant from the centre, show that

$$\tan \frac{\alpha}{2} \tan \frac{\beta}{2} \tan \frac{\gamma}{2} \tan \frac{\delta}{2} = 1,$$

where  $\alpha, \beta, \gamma, \delta$  are the eccentric angles of the extremities of the chord.

If  $P, Q$  are points on  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ , whose eccentric angles  $\theta$  and  $\phi$  satisfy

the relation  $\sec \theta + \sec \phi = 2$ , prove that  $PQ$  envelopes the ellipse

$$\frac{4x^2}{a^2} + \frac{y^2}{b^2} - \frac{4x}{a} = 0.$$

9. If a rectangular hyperbola circumscribes a triangle, prove that it also passes through the orthocentre of the triangle.

Show also that the hyperbola meets the circle circumscribing the triangle in a fourth point, which is at the other end of the diameter of the hyperbola which passes through the orthocentre of the triangle.

10. If the normals to  $\frac{l}{r} = 1 + \cos \theta$ , at the points  $P, Q, R$  whose vectorial angles are  $\alpha, \beta, \gamma$ , meet in a point  $O(\rho, \phi)$ , prove that  $2\phi = \alpha + \beta + \gamma$ .

If  $S$  be the focus of the parabola, find the equation to the circle on  $SO$  as diameter in terms of  $\alpha, \beta, \gamma$ .

11. Find the general equation of a conic which touches four fixed straight lines.

Show that the locus of the centres of conics inscribed in a quadrilateral is a straight line passing through the middle points of the diagonals of the quadrilateral.

12. If  $\lambda_1$  and  $\lambda_2$  are the parameters of the confocals through  $(x_1, y_1)$  to the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1,$$

prove that

$$(i) \quad \frac{x_1^2}{a^2} + \frac{y_1^2}{b^2} - 1 = -\frac{\lambda_1 \lambda_2}{a^2 b^2},$$

$$(ii) \quad x_1^2 + y_1^2 - a^2 - b^2 = \lambda_1 + \lambda_2.$$

Hence express  $\tan \frac{\phi}{2}$  in terms of  $\lambda_1$  and  $\lambda_2$ , where  $\phi$  is the angle between the tangents from  $(x_1, y_1)$  to the ellipse.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Candidates are required to answer Questions 5 and 9, and any FOUR of the remaining questions*

*The figures in the margin indicate full marks*

[N.B.—The co-ordinates involved in the Cartesian equations of curves or surfaces are rectangular]

1. Find the volume of the tetrahedron defined by the four vertices 16

$(x_1, y_1, z_1), (x_2, y_2, z_2), (x_3, y_3, z_3),$  and  $(x_4, y_4, z_4).$

$ABC$  and  $DEF$  are two known triangles situated in different planes, and a variable point  $P$  is subjected to the condition that the sum or difference of the volumes of the two tetrahedra  $\{PABC\}$  and  $\{PDEF\}$  is constant. Prove that the locus of  $P$  in space consists of two planes.

2. Work out an expression for the perpendicular dropped from a point  $(\alpha, \beta, \gamma)$  upon the plane 16

$$ax + by + cz + d = 0.$$

Consider the plane  $L$ , viz.

$$4x + y + z - 13 = 0,$$

and the sphere  $S$ , viz.

$$x^2 + y^2 + z^2 + 2x - 2y + 4z - 12 = 0.$$

and show that the radius of  $S$  equals the perpendicular distance of its centre from  $L$ .

Deduce or prove directly that the two spheres, viz.  $S$  and

$$x^2 + y^2 + z^2 - 2x - 3y + 8z + 1 = 0$$

touch each other, the (common) tangent plane at the point of contact being  $L$ .

3. Calculate the angle included between two straight lines whose direction-cosines are  $(l, m, n)$  and  $(l', m', n')$ . 16

Reduce to the analytic form the condition that the right line joining the points  $(x', y', z')$  and  $(\alpha, \beta, \gamma)$  may make an angle  $\theta$  with the direction  $(l, m, n)$ ; and hence, or otherwise, derive the Cartesian equation of the right circular cone, of which the vertex is  $(\alpha, \beta, \gamma)$ , the axis has  $(l, m, n)$  for direction-cosines, and the semi-vertical angle is  $\theta$

Verify that the Cartesian equation

$$\frac{x^2 + y^2}{\sin^2 \theta} = \frac{z^2}{\cos^2 \theta}$$

defines a right circular cone of vertical angle  $2\theta$ . Can you determine the axis?

4. Determine the polar plane of the point  $(x', y', z')$  with respect to the conicoid 16

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1,$$

and prove that, if the polar plane of a point  $P$  goes through a second point  $Q$ , that of  $Q$  must go through  $P$ .

An arbitrary point  $P$  moves about in space so that its polar plane with respect to the ellipsoid

$$\frac{x^2}{2} + \frac{y^2}{3} + \frac{z^2}{4} = 1$$

may always pass through the fixed points  $(1, 1, 1)$  and  $(2, 3, 4)$ . Identify the space-locus of  $P$  with the right line

$$\frac{x-6}{1} = \frac{y+9}{-3} = \frac{z-4}{2}.$$

5. Prove that two real generators can be drawn through every point of a hyperboloid of one sheet. 18

Obtain the general equations of the two sets of generators of the hyperboloid

$$x^2 + y^2 - z^2 = 1,$$

and verify that the plane

$$9x + 2y - 7z = 6$$

contains those two generating lines whose direction-cosines are proportional to  $(8, 4, 5)$  and  $(16, -8, 17)$ . Does the plane touch the surface? If so, find the point of contact.

6. Investigate the circular sections of the elliptic paraboloid

16

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = \frac{2z}{c} \quad (\text{where } a > b > 0),$$

and note particularly the *real* sections.

For the paraboloid

$$x^2 + 2y^2 = kz,$$

prove that, whatever be the value of the constant  $k$ , every *real* cyclic plane must be parallel to one or other of the two planes, which bisect the angle between the coordinate planes  $XOY$  and  $XOZ$ .

7. Outline a method of finding the centre of a quadric given by the general Cartesian equation. 16

Prove that each of the two quadrics

$$2x^2 + y^2 - 2z^2 - 4x - 4y + 12z - 13 = 0$$

and

$$2x^2 + y^2 - 2z^2 - 8x - 6y + 16z - 16 = 0$$

passes through the centre of the other, and that the line joining the two centres coincides *in position* with the shortest distance between the two straight lines

$$\frac{x-1}{2} = \frac{y-2}{8} = \frac{z-3}{-5}$$

and

$$x-2 = \frac{y-3}{-8} = \frac{z-4}{-8}$$

8. Establish the formula

16

$$V \cdot aV\beta\gamma = \gamma Sa\beta - \beta S\gamma a$$

for any three vectors  $a, \beta, \gamma$ .

If  $\lambda, \mu, \nu$  denote the vectors  $V\beta\gamma, V\gamma a, Va\beta$  respectively, substantiate the following relations :

$$a' // V\mu\nu, \beta // V\nu\lambda, \text{ and } \gamma // V\lambda\mu.$$

9.  $a, \beta, \gamma$  being three vectors, demonstrate the following formulae : 16

$$(i) (a + \beta)^2 = a^2 + \beta^2 + 2Sa\beta;$$

$$(ii) (a + \beta + \gamma)^2 = a^2 + \beta^2 + \gamma^2 + 2S\beta\gamma + 2S\gamma a + 2Sa\beta.$$

Granting the relation

$$(a + \beta)^2 = a^2 + \beta^2 + 2a\beta,$$

identify the *directions* of the vectors  $a$  and  $\beta$ .

10.  $a, \beta$  being a pair of *orthogonal* vectors with the *same* tensor  $c$ , and  $\theta$  being a certain (scalar) angle, six other vectors  $\rho_1, \rho_2, \rho_3, \dots, \rho_6$  are defined by 16

$$\rho_1 = a \cos \theta + \beta \sin \theta,$$

$$\rho_2 = a \cos \left( \theta + \frac{\pi}{3} \right) + \beta \sin \left( \theta + \frac{\pi}{3} \right),$$

$$\rho_3 = a \cos \left( \theta + \frac{2\pi}{3} \right) + \beta \sin \left( \theta + \frac{2\pi}{3} \right),$$



$$\rho_4 = a \cos (\theta + \pi) + \beta \sin (\theta + \pi),$$

$$\rho_5 = a \cos \left( \theta + \frac{4\pi}{3} \right) + \beta \sin \left( \theta + \frac{4\pi}{3} \right),$$

and 
$$\rho_6 = a \cos \left( \theta + \frac{5\pi}{3} \right) + \beta \sin \left( \theta + \frac{5\pi}{3} \right).$$

Prove that the extremities of these six vectors (drawn from a common origin) determine a regular hexagon of side  $c$ .

### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*You are required to attempt the FIFTH, EIGHTH, and ELEVENTH questions; full marks may be obtained by answering these and any FOUR of the remaining questions*

1. State clearly what is meant by

$$(i) \lim_{x \rightarrow a} f(x); \quad (ii) \lim_{x \rightarrow \infty} f(x).$$

Calculate :

$$(i) \lim_{x \rightarrow 0} \left\{ \operatorname{cosec}^2 x - \frac{1}{\log (1-x)} \right\};$$

$$(ii) \lim_{x \rightarrow 1} \{ (x^2 + 1)^{\frac{3}{2}} - (x^2 - 1)^{\frac{3}{2}} - 6x \},$$

2. If  $y = \sin (m \sin^{-1} x)$ , prove that

$$(y_{n+1})_0 = (n^2 - m^2)(y_n)_0,$$

and hence find  $(y_n)_0$ .

Expand  $y$  in powers of  $x$ , giving the general term. Deduce the expansion for the special case of  $m=3$ .

3. Find the conditions which should be satisfied by a function  $f(x)$  if it has a minimum for  $x=a$ .

A rectangular parallelepiped has two edges equal; find the least value that the sum of the areas of its faces can have corresponding to a prescribed volume.

4. Establish any two of the following :

(i) In the cycloid

$$x = a(t - \sin t), \quad y = a(1 - \cos t),$$

$$\rho^2 + s^2 = 16a^2;$$

$s$  being taken to be zero at the point determined by  $t=\pi$ .

(ii) In the tractrix,

$$x = a \left( \cos t + \log \tan \frac{t}{2} \right), \quad y = a \sin t,$$

the portion of the tangent intercepted between the curve and the  $x$ -axis is of constant length  $a$ .

(iii) In the lemniscate

$$r^2 = a^2 \cos 2\theta,$$

the product of the distances of any point on the curve from two fixed points (which you are to determine) is constant.

5. Sketch the curve

$$y(x^2 + y^2) = a^2 x,$$

Prove that the points on the curve where the tangents are parallel to the axis of  $x$  lie on the rectangular hyperbola  $xy = a^2$ , and that the three real points of inflexion lie on the straight line

$$x = y \sqrt{3+2\sqrt{3}}.$$

6. If  $V = f(x, y)$  and  $x = r \cos \theta$ ,  $y = r \sin \theta$ , transform the independent variables  $x, y$  to  $r, \theta$  in the expressions

$$x \frac{\partial V}{\partial x} + y \frac{\partial V}{\partial y}, \quad x \frac{\partial V}{\partial y} - y \frac{\partial V}{\partial x}.$$

Simplify the expression

$$\left( x \frac{\partial}{\partial x} + y \frac{\partial}{\partial y} \right)^2 V + \left( x \frac{\partial}{\partial y} - y \frac{\partial}{\partial x} \right)^2 V,$$

and hence, or otherwise, transform the independent variables to  $r, \theta$  in the expression

$$\frac{\partial^2 V}{\partial x^2} + \frac{\partial^2 V}{\partial y^2}.$$

7. Evaluate any *three* of the following integrals :

$$\int \frac{\sin^4 x}{\cos^3 x} dx, \quad \int \frac{x dx}{x^4 - 1}, \quad \int \frac{x dx}{(x-2)(x^2 - 2x + 4)},$$

$$\int \sin^m x dx,$$

$m$  being a positive integer.

8. Obtain the values of the definite integrals :

$$\int_1^\infty \frac{dx}{x \sqrt{x^2 + 1}}, \quad \int_0^\pi \frac{dx}{3 + \cos x}, \quad \int_0^\pi e^{-x} \cos 2x dx.$$

9. What is meant by the Fourier series corresponding to a function  $f(x)$ ? State (without proof) Fourier's theorem.

Find the Fourier series corresponding to a function  $f(x)$  which equals 0,  $x$  or  $-x$ , according as  $x$  is 0,  $>0$  or  $<0$ . Verify that the series equals  $f(x)$  for  $x=0, \frac{\pi}{4}, \frac{\pi}{2}$ .

10. The polar equation to the cardioid is

$$r = a(1 + \cos \theta)$$

Show that the circumference of the curve is  $8a$ .

If  $A$  be the area of the curve, and  $V$  the volume generated when the curve revolves about the line  $\theta = 0$ , find  $A$  and  $V$ , and show that

$$9V = 16aA.$$

11. Obtain the complete primitives of the differential equations :

$$(i) (1-x^2) \frac{dy}{dx} + 2xy = x - x^3;$$

$$(ii) \frac{d^2y}{dx^2} + y = x^2;$$

$$(iii) \frac{d^3y}{dx^3} - 3\frac{d^2y}{dx^2} + 2y = e.$$

12. (i) Integrate
- one*
- of the following equations :

$$(1) x \frac{d^2y}{dx^2} + (x-1) \frac{dy}{dx} - y = 0$$

$$(2) y \frac{d^2y}{dx^2} - y^2 + 2 \left( \frac{dy}{dx} \right)^2$$

(ii) Find the general equation of the curve in which the normal makes equal angles with the radius vector and the initial line.

### FIFTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Attempt six questions only*

*The questions are of equal value*

1. A pack of cards is laid on a table, and each card projects in the direction of the length of the pack beyond the one below it. If each project as far as possible, show that the distances between the extremities of successive cards will form a harmonical progression.

2. If all the forces in a coplanar system are rotated about their points of application through the same angle in their own plane, show that their resultant passes through a fixed point in the body.

If the original forces are in equilibrium, and each is turned through the same angle, show that they are equivalent to a couple.

3. Enunciate the Principle of Virtual Work for forces acting in one place on a rigid body.

Seven equal uniform heavy bars, freely jointed together at common extremities, form a regular heptagon,  $ABCDEFGH$ , the system being suspended vertically from the point  $A$ , and the vertices  $G$  and  $H$  being connected by a weightless strut, as also the vertices  $B$  and  $F$ . Find the pressure in each strut,

4. (i) A right line cuts off a constant area from an ellipse; find the locus of the centroid of the portion cut off.

(ii) Find the centre of mass of a quadrant of an ellipse in which the density at any point varies as the distance of the point from the major axis.

5. Define 'catenary of uniform strength.' Find its equation. Prove that the area of the normal section at any point in the catenary of uniform strength is proportional to the radius of curvature.

6. A gun is placed on a plane hillside; prove that the area commanded on the slope by the gun is bounded by an ellipse of which the position of the gun is a focus, the major axis is along the line of greatest slope, the eccentricity is the sine of the angle of greatest slope, and the semi-latus-rectum is of length equal to twice the greatest distance to which the gun can send a shot vertically upwards.

7. Two equal particles are connected by a string, one point of which is fixed, and the particles are describing circles of radii  $a$  and  $b$  about this point with the same angular velocity so that the string is always straight. The string is suddenly released. Prove that the tensions of the two portions are altered in the ratio of  $a+b : 2a$  and  $a+b : 2b$ .

8. (i) Show that in a central orbit

$$r^2 = h^2 \left[ u^2 + \left( \frac{du}{d\theta} \right)^2 \right].$$

(ii) Show that the only law for a central attraction for which the velocity in a circle at any distance is equal to the velocity acquired in falling from infinity to that distance is that of the inverse cube.

9. A heavy uniform chain, of length  $2l$ , hangs over a small smooth fixed pulley, the length  $l+c$  being at one side, and  $l-c$  at the other. If the end of the shorter portion be held, and then let go, show that the chain will slip off the pulley in time

$$\left( \frac{l}{g} \right)^{\frac{1}{2}} \log \frac{l + \sqrt{l^2 - c^2}}{c}.$$

10. A particle is projected along the inside of a vertical hoop from its lowest point with such a velocity that it leaves the hoop and returns to the point of projection again. Find the velocity of projection, and determine where the particle leaves the hoop.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer SIX questions, THREE from each group*

*The questions are of equal value*

### GROUP A

1. Define pressure at a point of a fluid; and find the pressure of a heavy liquid, the density of which at a depth  $x$  is

$$e^{2x} (2 \cos 2x + 3 \sin 2x).$$

A layer of water rests upon a liquid of specific gravity 1.5 with which it does not mix. A triangle of altitude  $h$  is immersed vertically in the two liquids, so that the base of the triangle is in the surface of the water. If the thrusts on the two parts of the triangle, which are in contact with the two liquids, be equal show that the depth  $x$  of the water satisfies the equation

$$7x^3 - 9hx^2 - 8h^2x + 8h^3 = 0.$$

2. Explain as fully as you can the process of finding thrusts on curved surfaces in contact with a heavy liquid.

A uniform circular plate wholly immersed in a heavy homogeneous liquid is movable about its centre of gravity. Prove that the locus of the centre of pressure is a sphere.

3. Find the condition for stability of a body floating freely in a heavy liquid of specific gravity  $\delta$ .

A rectangular lamina rests in a liquid of twice its own density with two of its sides vertical, and is movable in its own plane about the middle point of one of its vertical sides. Prove that for stability

$$\frac{4a}{b} > \sqrt{6},$$

where  $b$  = the length of the vertical sides, and  $a$  = the length of the horizontal sides of the rectangle.

4. Describe fully a common hydrometer and explain how it is graduated

The readings of a perfect mercurial barometer are  $a$  and  $\beta$ , while the corresponding readings of a faulty one, in which there is some air, are  $a$  and  $b$ . Prove that the correction to be applied to any reading  $c$  of the faulty barometer is

$$\frac{(a-a)(\beta-b)(a-b)}{(a-c)(a-a)-(b-c)(\beta-b)}.$$

5. A hollow closed conical vessel of height  $h$  floats partially immersed in water with vertex downwards and axis vertical. A hole is then made very near the vertex and water allowed to come into the vessel so that no air escapes from within. If the vertex was originally at a depth  $b$  and  $H$  is the height of the water barometer, prove that the new depth  $c$  of the vertex satisfies the equation

$$c^3 - b^3 = \left\{ c = \frac{H(c^3 - b^3)}{4^3 - (c^3 - b^3)} \right\}^3.$$

### GROUP B

6. Define astronomical refraction and prove that, for moderate zenith distances, refraction varies as the tangent of the zenith distance.

Find the latitude of a place at which the observed meridian zenith distances of a circumpolar star are  $60$  and  $30$  degrees. Also calculate the declination of the star. [Take the coefficient of refraction to be  $58.4$  seconds.]

7. Find the mean time at an instant when you are given the sidereal time at that instant, and conversely.

If the sidereal time at mean noon were  $16$  hr.  $20$  min.  $48$  sec., what was the error of your watch at  $2$  o'clock when a sidereal clock was at  $18$  hr.  $21$  min., the sun's mean motion in longitude being  $59' 33''$  in a mean solar day?

8. Find the effect of annual aberration on the apparent position of a heavenly body

If the equation of the earth's orbit be  $f(r, p) = 0$  referred to the sun as pole, prove that the absolute path traced out by a heavenly body owing to annual aberration is  $f\left(\frac{c^2}{p}, \frac{c^2}{r}\right) = 0$ ,  $c$  being a constant.

9. Explain as fully as you can the phenomenon of the harvest moon

Prove that at any place of the arctic circle the daily displacement of the point of sunset is equal to the sun's change in longitude during the same interval.

10. (i) Show that there cannot be fewer than two eclipses every year.

(ii) Find the maximum duration of an eclipse of the moon and the maximum duration of totality.

(iii) Show that a lunar eclipse begins and ends at the same instant at all places from which it is visible.

## MATHEMATICS—PASS

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		„ DEHAPRASAD GHOSH, M.A., B.L.
		DR. JYOTIRMAY GHOSH, PH.D.
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		„ KARUNAMAY KHASTGIR, M.Sc.
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		„ MANMATHANATH RAY, M.A., B.L.
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		„ MADHUSUDAN SARKAR, M.Sc.
		„ HARSHANATH SEN, M.Sc.
		„ SURENDRANATH SEN, M.A.
		„ HEMCHANDRA SENGUPTA, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only SEVEN questions to be attempted, of which not more than FOUR  
to be selected from the same group*

*Each question carries 14 marks, 2 marks reserved for special  
excellence and neatness*

## GROUP A

1. (i) Find the general values of  $\theta$  which satisfy the equation  $\sin \theta + 2 \cos \theta = 1$ .

(ii) Calculate the limiting value of

$$\tan 2\theta - 2 \tan \theta$$

when  $\theta \rightarrow 0$ .

2. (i) If  $A+B+C=\pi$  and  $\cos A = \cos B \cos C$ , prove that  $\cot B \cot C = \frac{1}{2}$ .

(ii) If  $A, B, C$  are the angles of a triangle, show that  $2 \cot A + 2 \cot B + 2 \cot C$  is never less than

$$\operatorname{cosec} A + \operatorname{cosec} B + \operatorname{cosec} C.$$

3. (i) With the usual notation, establish the following :

$$\sin A \sin B \sin C = 2R.$$

(ii) Obtain the expression for the radius  $r$  of the inscribed circle in the form

$$r = 4R \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}.$$

4. (i) Prove that for all real values of  $m$ ,

$$\cos m\theta + i \sin m\theta$$

is a value of  $(\cos \theta + i \sin \theta)^m$ ,

(ii) If  $x = \cos \frac{\pi}{2^n} + i \sin \frac{\pi}{2^n}$ , prove that

$$x_1 \cdot x_2 \cdot x_3 \dots \text{ad inf.} = -1.$$

5. (i) Find the value of  $\tan (\tan^{-1} x + \cot^{-1} x)$ .

(ii) Solve

$$\tan^{-1} (x-1) + \tan^{-1} x + \tan^{-1} (x+1) = \tan^{-1} 3x.$$

6. (i) Find the sum of the following  $n$  terms :

$$\tan x + \frac{1}{2} \tan \frac{x}{2} + \frac{1}{2^2} \tan \frac{x}{2^2} + \dots + \frac{1}{2^{n-1}} \tan \frac{x}{2^{n-1}}.$$

(ii) Deduce its value when  $n$  is indefinitely increased.

7. Show that for all real values of  $\theta$

$$e^{i\theta} = \cos \theta + i \sin \theta.$$

Can you use this to prove that the circular functions are all periodic?

### GROUP B

8. (i) Obtain the equation of the straight line joining the origin to the intersection of the straight lines  $2x + 3y = 1$ ,  $x - y = 2$ .

(ii) A straight line moves so that the sum of the reciprocals of its intercepts on the axes is constant. Show that it passes through a fixed point.

9. (i) Calculate the angle between the two straight lines represented by  $ax^2 + 2hxy + by^2 = 0$ .

(ii) Show that the lines joining the origin to the points of intersection of  $3x^2 + 3xy - 3y^2 + 2x + 3y = 0$  and  $3x - 2y = 1$  are at right angles.

10. (i) What condition or conditions must be satisfied in order that the general equation of the second degree in rectangular Cartesian coordinates may represent a circle?

(ii) Show that the equation

$$(y - x + 3)^2 + 2(x - 2)(y + 2) = 0$$

represents a circle, of which  $x = 2$  and  $y + 2 = 0$  are two tangents. What is represented by  $x - y = 3$ ?

11. (i) Show that the equation  $y^2 = 2x + 3$  represents a parabola. Find its latus rectum and the coordinates of the focus.

(ii) Two equal parabolas have the same vertex and their axes are at right angles. Prove that they cut again at an angle  $\tan^{-1} \frac{1}{2}$ .

12. (i) Show that the straight line  $y = mx + \frac{a}{m}$ , where  $m$  is a parameter, always touches a parabola.

(ii) Use this fact to find the locus of the point of intersection of two tangents of a parabola which make an angle  $\alpha$  with one another.

13. (i) What are 'conjugate diameters' and the 'eccentric angle' of a point on a conic?

(ii) Prove that the eccentric angles of the extremities of any diameter differ by an odd multiple of  $\pi$ , but those of the extremities of two conjugate semi-diameters differ by an odd multiple of  $\frac{\pi}{2}$ .

14. (i) Find the equation of an hyperbola referred to any pair of conjugate diameters as axes of coordinates.

(ii) If the polar of a point  $(\alpha, \beta)$  with respect to the parabola  $y^2 = 4ax$  touches the circle  $x^2 + y^2 = 4a^2$ , prove that the point  $(\alpha, \beta)$  lies on the rectangular hyperbola  $x^2 - y^2 = 4a^2$ .

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer EIGHT questions, FOUR from each group  
The questions are of equal value*

## GROUP A

1. Define the *differential coefficient* of a function  $f(x)$  for  $x=a$ .  
Find from the definition the differential coefficient of  $\log \cos x$ .
2. If  $y = xe^{-x} \cos x$ , then prove that

$$x^2 \frac{d^2 y}{dx^2} + 2x(x-1) \frac{dy}{dx} + 2(x^2 - x + 1)y = 0.$$

3. Enunciate Taylor's Theorem and apply it to obtain the Binomial Expansion

$$(a+h)^n = a^n + {}^nC_1 a^{n-1} h + {}^nC_2 a^{n-2} h^2 + \dots + {}^nC_r a^{n-r} h^r + \dots + h^n.$$

Prove that

$$e^x \log(1+x) = x + \frac{x^2}{2!} + \frac{2x^3}{3!} + \frac{3x^4}{4!} + \dots$$

4. Prove that

$$\frac{d^n}{dx^n} (e^{ax} \sin bx) = r^n e^{ax} \sin (bx + n\phi),$$

where  $r^2 = a^2 + b^2$ ,  $\tan \phi = \frac{b}{a}$ .

Find the fourth differential coefficient of  $x^2 \sin 2x$ .

5. Find a necessary condition for the existence of a maximum value of  $f(x)$  at  $x=a$ .

Given the total surface  $2\pi a^2$  of a right circular cylinder, find the cylinder of maximum volume.

6. Find the asymptotes of the curve

$$x^2 y - xy^2 + xy + y^2 + x - y = 0;$$

and roughly trace the curve.

## GROUP B

7. Evaluate

$$(i) \int \frac{\sin^{-1} x}{\sqrt{1-x^2}} dx;$$

$$(ii) \int \frac{7x-9}{x^2-2x+36} dx.$$

8. Integrate

$$(i) \int \frac{dx}{a+b \sin x};$$

$$(ii) \int \frac{dx}{13+3 \cos x + 4 \sin x}$$



9. (i) If  $a$  be positive, show that

$$\int_{-1}^{+1} \frac{dx}{\sqrt{1-2ax+x^2}} = 2, \text{ if } a < 1,$$

$$\text{or } = \frac{2}{a}, \text{ if } a > 1;$$

$$(ii) \int_0^{\frac{1}{2}} \frac{dx}{(1-2x^2)\sqrt{1-x^2}} = \frac{1}{2} \log(2 + \sqrt{3}).$$

10. Find the area of the loop of the curve

$$y^2 = x(x-a)$$

11. A circle of radius  $a$  revolves about a tangent line : find the volume generated.

12. Solve any two of the following :

$$(i) \frac{dy}{dx} = \frac{y(x-2y)}{x(x-3y)};$$

$$(ii) \frac{dy}{dx} + \frac{xy}{1-x^2} = x\sqrt{y};$$

$$(iii) \frac{d^2y}{dx^2} - 4\frac{dy}{dx} + 3y = 0.$$

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Any six questions carry full marks; but not more than FOUR from either group should be attempted*

*The questions are of equal value*

### GROUP A

1. Prove that the pressure of a heavy homogeneous liquid at all points in the same horizontal plane is the same, and deduce that the surface of a heavy liquid at rest is horizontal.

Prove that if a parallelogram be immersed in any manner in a heavy homogeneous liquid, the sum of the pressures at the extremities of one diagonal is equal to the sum of the pressures at the extremities of the other diagonal.

2. Find the resultant thrust on any surface immersed in a heavy liquid.

Find the centre of pressure of a plane circle immersed in a vertical plane in a liquid.

3. Find the conditions of equilibrium of a body partly immersed in a liquid and supported by a string attached to some point of it.

A uniform rod capable of turning about one of its ends, which is out of water, rests inclined to the vertical with one-third of its length in water. Prove that its specific gravity is  $\frac{4}{3}$ .

4. Determine the specific gravity of a liquid with the aid of a Nicholson's Hydrometer.

Water is poured into a U-tube, the legs of which are 8 inches long, till they are half full. As much oil as possible is then poured into one of the legs. What length of the tube does it occupy, the specific gravity of the oil being  $\frac{3}{4}$ ?

5. Find the difference in the altitude of two points by means of barometric readings.

The readings of a faulty barometer in which there is some air are  $\alpha$  and  $\beta$  when the true readings are  $a$  and  $b$ . Find the true reading when the faulty barometer reads  $\gamma$ .

6. Explain the action of the siphon, and find the conditions which must hold so that the siphon can act.

Explain the action of a hydrostatic machine which may be used for the purpose of pumping the air out of a vessel in which a vacuum is desired.

### GROUP B

7. Explain Foucault's pendulum experiments to prove the earth's rotation.

If a person travelling eastward go round the earth, he will at the end of his journey appear to have gained a day. On the other hand, if he travel westward, he will appear to lose a day. Explain this.

8. Obtain the coefficient of atmospheric refraction by Bradley's method.

The altitude of a star is observed, and found to be the angle whose sine is  $\frac{4}{5}$ . Calculate the true position of the star, assuming the amount of refraction at an altitude of  $45^\circ$  to be  $58.2''$ .

9. Find the duration of twilight at the equator during the equinoxes.

Show how the duration of twilight at any place at a time depends upon the latitude of the place and the declination of the sun.

What are the conditions that the twilight may last all night? Find the lowest latitude at which it is possible for twilight to last all night.

10. State Kepler's laws.

Deduce Kepler's third law from the law of gravitation.

If there be 378 days between two successive oppositions of Saturn, find the length of Saturn's year.

11. Determine the first point of Aries by Flamsteed's method, making the correction necessary owing to the precession of the equinoxes. What are the advantages of Flamsteed's method?

How do you determine the position of the ecliptic on the celestial sphere?

12. Explain the phenomenon of the Harvest Moon.

Obtain the height of a lunar mountain in the form  $\frac{\delta^2}{2r \sin^2 \phi}$ , where  $\delta$  is the projection of the distance between the bright summit of the mountain top and the line of separation of light and darkness on a plane perpendicular to the line of sight,  $r$  is the radius of the moon, and  $\phi$  is the angle of elongation of the moon from the sun as seen from the earth.

## PHYSICS—HONOURS

## FIRST PAPER

*Paper-Setters—* (Pass & Hons.) { DR. BRAJENDRANATH CHAKRABARTI, D.Sc.  
 „ WALI MAHAMMAD.  
 „ MR. SATYENDRANATH BOSE, M.Sc.  
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 MR. TULSIDAS KAR, M.A.

*Examiners—* { REV. FATHER A. BRIOT, S.J.  
 „ PRASANTACHANDRA MAHALANOBIS, M.A.  
 (CANTAB.).  
 DR. SISIRKUMAR, MITRA, D.Sc.  
 MR. D. E. ROBERTS, M.A.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Not more than six questions to be attempted*

*The questions are of equal value*

1. (a) Write a short note on the determination of  $g$  by the Kater method. How does the earth's rotation and its spheroidal form affect the apparent value of gravity?

(b) A square plate of metal is arranged so as to execute small oscillations in its own plane about an axis passing through one corner. Calculate the length of the equivalent simple pendulum.

2. Describe some method of determining the value of the gravitational constant. Show how the density of the earth can be calculated if the constant be known.

3. Describe carefully the ripple method of measuring surface tensions of liquids. Establish all necessary formulae, and discuss the principal advantages of the method.

4. Describe any method of determining the Poisson ratio of a material available in the form of a wire. Establish the formula you would use.

5. What is Brownian movement, and how can it be observed? Show how from a study of such motion of colloidal particles Avogadro's number can be deduced.

6. (a) Find the relation between the elasticity of a fluid and the velocity of sound propagation in it.

(b) A litre of water weighing one kilogram is subjected to an extra pressure of 76 cm. of mercury. It is found that its volume is diminished by  $4.8 \times 10^{-2}$  c.c. Estimate the velocity of sound in water.

7. Discuss the phenomenon of resonance. What effects have damping on resonance? How would you utilize the principle of resonance to determine the velocity of sound in carbon-dioxide?

8. Discuss the vibration of a plucked string. How does the point of plucking affect the quality of the note emitted?

9. Write short notes on any two of the following :—

- (a) Doppler's effect.
- (b) Sound-wave photography.
- (c) Natural and temperate scale.
- (d) The ear as a detector and analyser of sounds.
- (e) The phonograph.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*The questions are of equal value*

1. Give an account of the methods used in measuring the specific heat of water for temperatures between  $0^{\circ}$  and  $100^{\circ}$  C. Discuss the results obtained.

2. Describe experimental methods of measuring accurately the thermal conductivities of metals and gases.

How is the thermal conductivity correlated with other properties of these two classes of substances?

Indicate the theoretical basis of these correlations.

3. Describe some methods of measuring and the ratio of the two specific heats of a gas.

What information do we get from such measurements about the structures of the molecules constituting a gas?

4. Deduce according to the kinetic theory an expression for the viscosity of a gas. How far do the experimental results agree with the predictions from the theory?

5. Define the thermodynamic scale of temperature.

Describe an experimental method by which the readings of a gas thermometer can be corrected to the above scale of temperature.

6. Deduce expressions for the entropies of a perfect gas and of a mixture of two such gases. Hence show that the following two processes are irreversible :—(a) a gas expanding into a vacuum, and (b) two gases, at the same pressure and occupying two different volumes, diffusing into one another.

7. Calculate the specific heat of steam at  $100^{\circ}$  C. from the following data :—

Specific heat of water at  $100^{\circ}$  C. = 1.0074 calories.

Latent heat of water  $L = 60 T - 0.708t$ .

Deduce the formula you will use for the calculation.

Discuss what will happen to the saturated steam if it is adiabatically expanded or compressed.

8. Write short notes on the following types of heat engines :—(a) steam engine, (b) internal combustion engine, and (c) refrigerating machine.

9. Write a short essay on black body radiation, dealing with the following points :—(a) its production, (b) the laws obeyed by it, and (c) their experimental verification.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only six questions are to be attempted*

*The questions are of equal value*

1. Describe Foucault's method of measuring the velocities of light in air and in water. What important conclusion has been drawn from these experiments?
2. What is meant by 'equivalent lens'? Deduce an expression for the equivalent focal length of a system of two thin co-axial lenses placed at a distance apart in air. How does the focal length alter if the space between them is filled with water?
3. What do you mean by chromatic aberration in lenses? Show how approximate achromatism is obtained when two lenses are in contact and when they are not.
4. Discuss the formation of diffraction fringes produced by a straight edge placed at right angles to a parallel beam of light.
5. Describe and explain the methods of using the Fresnel's Biprism, and give the calculations necessary for determining by its aid the wave-length of light from a monochromatic source.
6. Give an account of the methods which have been used for the study of the ultra-violet end of the spectra.
7. Give an account of the different methods of producing rotation of the plane of polarization of light. Describe a sensitive arrangement for the experimental study of this rotation. What is rotatory dispersion?
8. Find an expression for the resolving power of a prism spectroscope. How would you test this experimentally?
9. Describe an experimental arrangement for the study of the normal Zeeman effect and give a theoretical interpretation of the phenomena observed.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Six questions are to be answered*

*The questions are of equal value*

1. (a) Define hysteresis. Prove that when any magnetic material is subjected to cyclic changes of magnetism, a loss of energy is involved proportional to the area of the hysteresis loop.  
(b) Calculate the loss of energy caused by hysteresis in one hour in 50 kilogram of iron when subjected to cyclic magnetic changes. The frequency is 25, and the area of the hysteresis loop represents 2,400 ergs per cubic centimetre and the density of iron is 7.8.
2. (a) Derive the formula for the capacity per unit length of two long co-axial cylinders.  
(b) A condenser of capacity  $C$  is charged to a potential  $V$  and its plates are connected to those of an uncharged condenser made up of two concentric spheres of radii  $a$  and  $b$  separated by an oil of dielectric constant  $K$ . Find the resultant potential and the loss of energy.

3. (a) A point charge is placed in front of an infinite plane conducting sheet which is earthed. Show that the density of the charge induced on the conductor varies inversely as the cube of the distance from the point.

(b) Show that if the point charge be replaced by a small sphere of radius  $a$ , the system has a capacity  $a \left(1 + \frac{a}{2p}\right)$  approximately, where  $p$  is the perpendicular distance to the plane.

4. (a) State briefly the experimental arrangement required for determining resistances of the order of 20 megohms and upwards.

(b) Explain the theory underlying it.

5. (a) Find the expression for the instantaneous value of the current in a circuit containing resistance  $R$ , self-inductance  $L$ , and an alternating E.M.F.,  $E \cos \omega t$ .

(b) A coil of wire has a resistance of 50 ohms, but when traversed by an alternating current of 1 ampere at 25 cycles per second shows a voltage drop of 100 across its terminals.

Find the inductance of the coil.

6. (a) Write a note on any experimental arrangement for determining the ratio of electromagnetic to electrostatic units.

(b) Determine the value of one microfarad in electrostatic units.

7. (a) Describe the method of determination of the ratio of charge to the mass  $e/m$  (i) for cathode rays, (ii) for positive rays.

(b) State briefly the importance of these determinations in modern physics.

8. (a) Describe some form of X-ray bulb and the electrical apparatus necessary to obtain X-rays with it.

(b) How has it been shown that X-rays are a wave phenomenon of the same essential nature as light?

9. Distinguish between atomic weights and atomic numbers. What of these is more fundamental in determining the properties of an atom? Give reasons.

## PHYSICS—PASS

### FIRST PAPER

Examiners— $\left\{ \begin{array}{l} \text{MR. DWIJENDRAKUMAR MAJUMDAR, M.A.} \\ \text{,, DWARKANATH MUKHERJEE, M.Sc.} \\ \text{,, GANGADHAR MUKHERJEE, M.A.} \\ \text{,, ABINASHCHANDRA SAHA, M.Sc.} \\ \text{,, JITENDRANATH SEN, M.A.} \\ \text{,, PROMODCHARAN SEN, M.Sc.} \end{array} \right.$

*Candidates are required to give their answers in their own words as far as practicable*

*Only six questions to be attempted*

*The questions are of equal value*

1. Explain what you understand by the gravitational potential at a point.

Prove that the gravitational potential due to a spherical shell of uniform density, at any point outside the sphere, is the same as if the whole mass is concentrated at the centre.

2. Explain how the value of  $g$  at any point on the surface of the earth can be determined with Kater's pendulum. How should the value vary if the experiment be performed at the bottom of a deep mine, assuming the earth to be of uniform density? Does the result agree with actual observation?

3. Define osmotic pressure of a solution and describe an arrangement for making a direct measurement of the pressure. State the laws and combine them into a single formula.

4. Distinguish clearly between the coefficients of apparent and absolute expansion of a liquid.

Explain how the coefficient of absolute expansion of glycerine can be determined with the weight thermometer, if that of mercury be given. Deduce the formulae to be used.

5. Describe Victor Meyer's method for finding the vapour density of a liquid.

Calculate the vapour density of ether from the following data :—

Volume of air collected over water	= 40 c.c.
Temperature of the water	= 30°C.
Barometric height	= 754 mm.
Max. pressure of aqueous vapour at 30° C.	= 32 mm.
Mass of ether used	= 0.1135 gm.
Mass of 1 c.c. of air at N.T.P.	= 0.001293 gm.

6. Clearly distinguish between an isothermal and an adiabatic operation.

$V_1$  volume of dry air at  $t^\circ \text{C.}$  is adiabatically compressed to occupy  $V_2$  volume. Find an expression for the rise in temperature.

7. Explain what you understand by the dispersive power of a material.

Deduce the condition of achromatism for two lenses in contact with each other.

8. On an optical bench an object is clamped at 10 cm., a convex lens ( $f=10 \text{ cm.}$ ) at 25 cm and a concave lens ( $f=15 \text{ cm.}$ ) at 45 cm.

Calculate the position of the image formed and the magnification produced.

9. Explain the terms—ordinary ray, extraordinary ray, and optic axis.

Explain the construction of Nicol's prism and show how it can be used as a polarizer and as an analyser.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only six questions are to be attempted*

*The questions are of equal value*

1. Derive a general expression for the velocity of sound in a gas and also discuss formulae due to Newton and Laplace.

Calculate the velocity of sound in air at N.T.P. (The ratio of specific heats for air = 1.4.)

2. Write a short essay on resonance, pointing out how the subject may be experimentally illustrated.

3. A short magnet is free to rotate about an axis perpendicular to the axis of the magnet and passing through its centre. Obtain an expression for the potential at a fixed point in the plane of rotation and at an appreciable distance from the centre of the magnet.

Discuss how the potential at the point changes with the angle of rotation of the magnet.

4. What is meant by 'hysteresis' and by a 'cycle of magnetization'? Draw the hysteresis curves for (a) soft iron, and (b) steel.

Prove that the area of the B H curve denotes  $4\pi$  times the energy dissipated per c.c. of the magnetic substance during each cycle of magnetization.

5. Explain the action of a condenser, and define (a) the capacity of a condenser, and (b) the specific inductive capacity of a dielectric.

The thickness of the air layer between the two coatings of a spherical air condenser is 2 cm. The condenser has the same capacity as that of a sphere of 120 cm. diameter. Find the radii of the surfaces of the air condenser.

6. Show that the amount of heat generated per second in a conductor by the passage of a current through it is inversely proportional to the conductivity of the conductor.

A railway carriage is lit up by thirteen 9 candle-power lamps, each taking 1.22 amps. at 15 volts. What is the resistance of each lamp, how much heat, in calories, is generated per second in each lamp, and what is the total power in watts used in lighting the compartment?

7. How does the change of temperature affect the resistance of a conductor?

Describe an experimental arrangement illustrating how this property of conductors is utilized in the measurement of high temperatures.

8. Define the coefficient of self-induction of a circuit.

Find an expression for the current at any instant in a circuit of given resistance and self-inductance when subject to a simple harmonic E.M.F.

9. What are cathode rays? Describe experiments by which the nature of these rays has been determined.

What happens when these rays are suddenly stopped by impinging against a metallic surface placed in their path?

10. What is Peltier effect? Show that it may either be a heating or a cooling effect.

Devise an experiment to demonstrate the existence of the effect.

What is the difficulty in its exact determination?





## CHEMISTRY—HONOURS

## FIRST PAPER

( SIR P. C. RAY, KT., C.I.E., D.Sc., Ph.D.,  
F.C.S.PROF. PRAPHULLACHANDRA MITTER, M.A.,  
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*Paper-Setters—* { JNANENDRANATH MUKHERJEE, D.Sc.  
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,, DHIRENDRANATH MUKHERJEE, M.A.  
DR. PANCHANAN NIYOGI, M.A., Ph.D.  
( MR. RAJENDRANATH SEN, M.A., M.Sc.

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt FIVE questions only*

*The questions are of equal value*

1. Give a short account of the chemistry of the aliphatic ketones.
2. How are the tetra-alkylammonium hydroxides prepared? Mention their chief chemical characteristics and explain why they are regarded as valency compounds rather than molecular compounds.
3. Explain the various ways of replacing a hydrogen atom of an aliphatic hydrocarbon by each of the following groups :—  $\text{—OH}$ ,  $\text{—COOH}$ ,  $\text{—NH}_2$ ,  $\text{—NO}_2$ .
4. Give in detail the evidence on which the constitutional formula for malic acid is based. How do you explain its isomerism?
5. How would you prepare the following :—(a) dimethyl sulphate, (b) nitroglycerine, (c) benzidine, (d) acetophenone, (e) sulphaulic acid, (f) anthraquinone? State their uses.
6. Explain fully Körner's absolute method of orientation. How would you employ this method for determining the constitution of the dibromobenzenes?
7. A substance containing C=60.0, H=13.3, and O=26.7 per cent. and having a vapour density of 30.0, reacted with phosphorous pentachloride to yield another substance containing C=45.9, H=8.9, and Cl=45.2 per cent. Write down two possible structural formulae for the second substance and state what further information would be necessary to decide between them.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only FIVE questions are to be answered*

*The figures in the margin indicate full marks*

1. State the fundamental assumptions of Dalton's atomic theory. 20  
Explain clearly which of these assumptions require modification in the light of the recent advancement in physical science. How does chemical combination take place between atoms?

2. Compare the physical and chemical properties of the elements N, P, As, Sb, and Bi, with special reference to their hydrides, halides, and oxides. 20

3. Explain and illustrate what is meant by double and complex salts. State briefly how you would distinguish one from the other. What physical and chemical changes serve as criteria for the formation of complex salts? Give examples. 20

4. Explain the reactions, stating the conditions, if any, under which the following substances react :— 20

- (a) Carbon monoxide and steam.
- (b) Ammonia and chlorine.
- (c) Calcium carbide and nitrogen.
- (d) Sulphur dioxide and hydrogen sulphide.
- (e) Phosphorus, iodine, and water.
- (f) Potassium permanganate and hydrogen peroxide.
- (g) Iodine and potassium chlorate.

Give equations.

5. What are the causes of the luminosity of hydrocarbon flames? Describe the structure of a Bunsen flame, explaining the chemical changes that occur in different parts. Why does a Bunsen flame 'strike back'? 20

6. Describe the preparation and properties of some important compounds of tetravalent lead, trivalent manganese, bivalent chromium and univalent copper. 20

7. Give an account of the methods of formation of the oxyacids of nitrogen. Describe their properties and deduce their constitution.

8. A lead compound on analysis gave 73.4 per cent. Pb and 3.2 per cent of water. 0.235 gm. of the substance, when treated with an excess of potassium iodide solution acidified with hydrochloric acid, liberated an amount of iodine, which was equivalent to 12.5 c.c. of  $\frac{N}{10}$   $\text{Na}_2\text{S}_2\text{O}_3$  solution. 20

On igniting the substance, a residue of lead monoxide and chromium sesquioxide was left behind. The compound was insoluble in water, but on digestion with sodium sulphate solution, the latter became strongly alkaline and yellow. Give the molecular formula and the name of the compound.

(Pb=207.1, Cr=52.0)

## CHEMISTRY—HONOURS

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer FIVE questions only*

*All questions carry equal marks*

1. A thick-walled glass tube is half-filled with water and the air above is replaced by steam. The tube is now sealed off, and its temperature gradually raised to 400° C. Describe the processes that you will observe. Deduce the equation of corresponding states from Van der Waal's equation and discuss its applications.

2. Deduce thermodynamically an expression relating the change of melting point with pressure. Describe experimental methods for determining the variation of the melting-points of ice and acetic acid with pressure.

3. Give an account of Van't Hoff's contributions to the development of chemical laws and theories.

4. Explain clearly what is meant by the following statement:—'The molecular conductivity of a decinormal solution of potassium chloride at 18° is 112.' Discuss the principles underlying the method of Arrhenius for determining the degree of dissociation of an electrolyte.

5. 'The concentrations of any single molecular species in two phases at equilibrium bear a constant ratio to each other at the same temperature.' Discuss the above statement with typical illustrations.

6. Deduce from the law of mass action an expression for the velocity of bimolecular reactions. Discuss typical examples of such reactions. At 224° C. the vapour of phosphorous pentachloride is 62 per cent. dissociated. What is the ratio of opposing rates at this temperature?

7. Write notes on the following:—

(a) Reversible galvanic cells.

(b) Absorption of gases by solids.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer FIVE questions only*

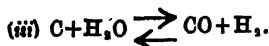
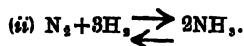
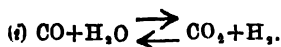
*All questions carry equal marks*

1. Give an account of the important methods for the production of oxygen and hydrogen on a commercial scale, and describe the industrial uses of these gases.

2. Describe the main features of the processes involved in the manufacture of formaldehyde and acetone from natural raw materials. Discuss the important uses of these substances.

3. In what respects do colloids differ from crystalloids? Illustrate your answer with typical examples. Describe how you would purify a colloidal substance.

4. (a) What would be the effect of increasing the pressure on the following systems at equilibrium?—



(b)  $2\text{SO}_2 + \text{O}_2 \rightleftharpoons 2\text{SO}_3 + 45.2 \text{ K. Cal.}$  Discuss this equation from the

standpoint of thermodynamics and state the conditions for the highest technical yield of sulphur trioxide.

5. Write an essay on *one* of the following :—  
 (a) The discovery of chlorine and of its elementary nature.  
 (b) The development of the theory of valency.
6. Discuss the principles involved in the various processes for obtaining metals from their sulphide ores.
7. Give commercial methods for the productions of—(a) hydroxylamine hydrochloride, (b) salicylic acid, (c) fuming sulphuric acid, (d) sodium hyposulphite.
8. How is white crystalline cane sugar manufactured? What are non-crystallizable sugars? Describe the various chemical reactions involved in the fermentation of sugars.

## CHEMISTRY—PASS

## FIRST PAPER

Examiners—	{	DR. ALI KARIM, D.Sc., (LOND.), D.I.C.
		„ DHIRENDRANATH CHAKRABARTI, PH.D.
		MR. ANANDAKISOR DAS, M.A.
		„ HARIDAS MUKHERJEE, M.A.
		DR. ANUKULCHANDRA SARKAR, M.A., PH.D.
		MR. PRIYABRATA SARKAR, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*Not more than six questions are to be attempted, Question 8 being compulsory*

*The figures in the margin indicate full marks*

1. State briefly the synthetic methods for the preparation of acetaldehyde and benzaldehyde. Compare the properties and reactions of the two compounds, and show the points of resemblance and difference between aliphatic and aromatic aldehydes. 16
2. Explain the following terms, illustrating your answer with examples :—(a) hydrolysis, (b) condensation, (c) sulphonation, (d) optical isomerism, (e) aromatic compound. 16
3. Starting from acetylene, how can you synthesize both  $\alpha$ - and  $\beta$ -lactic acids? How is  $\alpha$ -lactic acid ordinarily prepared and purified? State its properties. 16
4. Explain and illustrate what is meant by balanced action. Which of the following reactions can be classified under this head?— 16
  - (a) Steam acting upon red-hot iron.
  - (b) Hydrogen and iodine heated together.
  - (c) A solution of ferric chloride treated with caustic potash.
  - (d) A solution of magnesium chloride treated with ammonia.
  - (e) Give reasons for your answer, writing out the equations.
5. How would you prepare a pure sample of laevulose from cane-sugar? Compare and contrast the properties laevulose and dextrose. 16
6. Describe in detail how you would prepare pure specimens of phenol and aniline from a mixture of both. What is the action of (a) nitrous acid, (b) nitric acid, and (c) sulphuric acid on each?

7. Write short notes on the following :—

16

- (a) Osmotic pressure.
- (b) Catalysis.
- (c) Colloids
- (d) Neutralization.

8. 0.1842 gm. of a dibasic organic acid gave 0.884 gm. of  $\text{CO}_2$  and 0.1186 gm. of  $\text{H}_2\text{O}$  : 1.084 gm. of the substance required 28.32 c.c.

of  $\frac{N}{\infty}$  KOH for neutralization. Find the molecular formula.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only six questions are to be attempted*

*Each question bears the same value*

1. State Faraday's laws of electrolysis. A current passes simultaneously through acidulated water, a solution of copper sulphate, and fused silver chloride. What substances are produced in each cell, and how many grams of each in the time of 12.5 c.c. of  $\text{H}_2$  at N.T.P. are liberated from water? ( $\text{Cu}=63$ ,  $\text{Ag}=108$ .)

2. Describe by whom and how fluorine was isolated. Give a neat sketch of the apparatus used. Compare the properties of fluorine with those of other halogen elements.

3. Describe some methods by which atmospheric nitrogen has been 'fixed' and utilized.

4. Describe the action of—

- (a) potassium dichromate on potassium iodide and hydrochloric acid.
  - (b) potassium dichromate on green vitriol and sulphuric acid.
  - (c) potassium permanganate on green vitriol and sulphuric acid.
  - (d) stannous chloride on ferric chloride and potassium ferricyanide.
  - (e) sulphur dioxide on potassium dichromate and sulphuric acid.
- Give equations.

5. Name the important ores of lead. How is the metal extracted from its ores and refined? State the important uses of the metal and its alloys.

6. Describe the preparation of phosphine and compare its properties with those of ammonia and arsine.

7. Explain and illustrate the following :—

- (a) Allotropy.
- (b) Isomorphous mixtures.
- (c) Acid, basic, and neutral salts.
- (d) Peroxides.

8. What are the characteristic properties by which you can distinguish metals from non-metals?

How would you classify the following elements under those two heads :—  
As, S, Sb, Pb, Ag, Au, Cr, Sn, Al, and Hg?

Give reasons for your answer.

## PHYSIOLOGY—HONOURS

<i>Paper-Setters—</i> ( <i>Pass &amp; Hons.</i> )	{	SIR NILRATAN SIRCAR, Kt., M.A., M.D., LL.D.
		D.C.L.
		RAI BAHADUR DR. UPENDRANATH BRAHMACHARI,
		M.A., M.D., Ph.D.
		LT.-COL. A. C. MACGILCHRIST, I.M.S.
		PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.
		DR. BIJALIBIHARI SARKAR, D.Sc.
		„ GIRINDRASEKHAR BOSE, D.Sc., M.B.

## THEORETICAL

<i>Examiners—</i>	{	MR. NARENDRA MOHAN BASU, M.Sc.
		„ NIBARANCHANDRA BHATTACHARYYA, M.A.
		PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc.,
		F.R.S.E.
		DR. BIJALIBIHARI SARKAR, D.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FOUR questions to be attempted*

*All the questions carry an equal number of marks*

1. Discuss in detail the mechanical and chemical mechanism of the regulation of movement of blood through the capillaries.
2. Give a detailed account of the nervous regulation of respiration.
3. Give an account of the mechanism of carriage of carbon dioxide from the tissues to the lungs, and of the changes that take place in the blood in the course of the transport.
4. Discuss with reference to function the microscopical structure of the following tissues :—(a) skeletal muscle, (b) bundle of His. (c) Purkinje fibres.
5. Discuss Starling's method of determining the output of the heart.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Not more than FOUR questions are to be attempted*

*The questions are of equal value*

1. What are the chief functions of the kidney? State what you know about the neutrality of tissues and tissue fluids.
2. State all that you know about protein and nuclein metabolism.

3. Describe fully the secretory functions of the stomach, and discuss the influence of the nervous system upon gastric secretion and the chemical mechanism of the same.

4. Write short notes on :—

(a) Law of intestines.

(b) Insulin.

(c) Relation of urinary pigments to bile pigments.

5. Discuss fully what you know about the digestion and absorption of fat.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer only FOUR questions*

*The questions are of equal value*

1. Describe the methods of investigation that are adopted to determine the function of an autacoid. What is the present state of our knowledge regarding the chemical nature of autacoids?

2. Explain, from developmental point of view, the close functional relationship which exists between the sympathetic nervous system and the medulla of the adrenal gland.

3. Discuss the fate of amino-acids in the blood and tissues.

4. Analyse the 'all-or-none' law of muscular contraction, and show its applicability in the case of skeletal muscle.

5. What is chronaxie? Discuss its physiological significance.

### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer only FOUR questions*

*The questions are of equal value*

1. Describe the path of the cochlear root of the eighth cranial nerve.

2. How is the acuteness of vision determined?

3. With the help of diagrams, explain what is meant by the horopter.

4. Describe the condition known as decerebrate rigidity. How is it produced, and what nuclei are considered responsible for this condition?

5. Briefly describe the historical structure of the cerebral cortex. What are the functions of its several layers, and how has our knowledge regarding these functions been obtained?

## PHYSIOLOGY—PASS

*Examiners* — { MR. MANMATHANATH BANERJEE, M.Sc.  
 „ SAURINDRAMOHAN BANERJEE, M.Sc., M.B.  
 „ PHANINDRANATH BRAHMACHARI, M.Sc., M.B.  
 „ SATINDRAKUMAR SEN, B.Sc., M.B., D.P.H.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Describe in detail the effects of exercise on the circulatory system.
2. Describe the cardio-accelerator mechanism. What are the effects of adrenalin on the heart?
3. Describe the transport of carbon dioxide in the circulating blood. What is alkali reserve?
4. What do you know about the mechanism of oxidation in the tissues?
5. Write short notes on :—(a) immunity, (b) phagocytosis, (c) haemolysis, (d) agglutination, and (e) anaphylaxis.
6. Describe the part played by the urinary tubules in the secretion of urine.
7. Describe in detail the mechanism of the secretion of sweat.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Describe in detail the various properties and characteristics of the reflex arc.
2. Describe the pituitary body. Give a brief account of the functions of its different lobes.
3. Give an account of the changes which occur in nerve during activity.
4. Write short notes on :—(a) rigor mortis, (b) basal metabolism, (c) decerebrate rigidity, (d) corpus luteum, (e) vitamin B.
5. Give a detailed description of the internal ear.
6. Describe the different descending tracts in the spinal cord, by tracing them from their origin.
7. Give a detailed account of the movements of the stomach when filled with food after a meal.



## BOTANY—HONOURS

## FIRST PAPER

Paper-Setters—	{	PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc., F.R.S.E.
		„ S. P. AGHARKAR, M.A., Ph.D.
		MR. S. R. KASHYAP, B.A. (Cantab.).
		„ P. K. PARIJA.
		DR. KRISHNADAS BAGCHI, M.A., D.Sc.
		„ BIRBAL SAHANY, D.Sc.

## THEORETICAL

Examiners—	{	PROF. S. P. AGHARKAR, M.A., Ph.D.
		MR. SURENDRACHANDRA BANERJEE, M.A., B.Sc., F.L.S.
		DR. SAHAYRAM BOSE, Ph.D.
		PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc., F.R.S.E.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Illustrate your answers by suitable sketches wherever necessary*

*Answer any FIVE questions*

*All questions carry equal marks*

1. Write short morphological notes on any five of the following :—  
(a) roots of (i) *Ipoma batatas*; (b) stems of (ii) *Amorphophallus campanulatus*; (c) climbing organs of (iii) *Aristolochia odoratissima*, (iv) *Passiflora* sp.; (d) inflorescence and flower of (v) *Oryza sativa*, (vi) *Corchorus capsularis*; (e) fruits of (vii) *Ananas sativus*, (viii) *Anona reticulata*; (f) seeds of (ix) *Nephelium litchi*.
2. Enumerate the insectivorous plants occurring in Bengal and describe the contrivances for trapping insects developed in them. What benefit do the plants derive by this method of nutrition?
3. Describe the structure of the seed in the Gramineae, and discuss the morphology of the various structures found therein, illustrating your answer by the seeds of any species you may have examined.
4. Describe the contrivances for insect pollination in any two species you may have studied. Illustrate your answer by labelled sketches.
5. Give a general account of the range of floral structure in either the Palmaceae, or Leguminaceae, and discuss the affinities of the family selected by you. Mention the principal economic plants belonging to the family and give their geographical distribution.
6. Enumerate the principal oil yielding plants of India, refer them to their families, mention the parts of India where they are grown, and describe the uses to which the oils are put.
7. Write a short note regarding the edaphic and climatic factors and the effect produced by them on plant-life, illustrating your answer by Indian examples as far as possible.

## SECOND PAPER

## (THALLOPHYTA AND BRYOPHYTA)

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Describe the evolution of sexuality in the filamentous green algae. 20

*Or*, Describe the organs of reproduction in the genus *Ectocarpus*, and discuss their bearing on the origin of the sex organs in the Bryophyta.

2. *Either*, Give a short account of the chief forms of fructification in the higher Basidiomycetes. 20

*Or*, Give a brief account of the life-history of *Puccinia graminis*, with special reference to the conditions in India.

3. *Either*, Discuss the bearing of the sporophyte of *Riccia* on the origin of the Bryophytes from the green algae. 20

*Or*, Discuss the bearing of the structure of the sporogonium of *Anthoceros* on the origin of the Pteridophytes.

4. *Either*, Describe the chief forms of Lichens, giving examples from Indian species. 20

*Or*, Describe the process of sexual reproduction in the Zygomycetes.

5. *Either*, Give a short account of the main types of peristome met with in the mosses. 20

*Or*, Discuss the affinities of the genus *Sphagnum*.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer only FOUR questions*

*The questions are of equal value*

1. Discuss the influence of vegetation on climate.
2. Describe fully the role of sulphur and phosphorus in plant metabolism.
3. Discuss the influence of parasitism on the host and the parasite respectively.
4. Describe fully the nature of the chief katabolic process that takes place in the living plant. Under what conditions do you find marked variations in the process?
5. How is liquid water excreted by plants? Describe fully the histology of the structures concerned.
6. Describe the special features of xerophytes and halophytes, and show how the internal structure and external form in these plants are adapted to suit the special requirements of the respective type.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions. Give sketches wherever necessary*

1. Write an essay on graft hybrids.
2. Assign the following to their systematic position, and sketch the diagnostic features :—*Azolla*, *Trichomanes*, *Zygopteris*, *Asteroxylon*, *Calamostachys*.
3. Discuss briefly the present position of Darwin's theory of natural selection.
4. Explain as clearly as you can the value of fossil plants to students of evolution.
5. Describe the life-history of *Isoetes* and indicate the affinities of the genus.
6. Enumerate all the Indian Gymnosperms known to you, and indicate their distribution in this country.
7. Show how far the structure of the Cycadales indicates an origin from the Filicales.
8. Write a brief illustrated account of the most important Indian representations of the Glossopteris Flora.

## BOTANY—PASS

Examiners— { Mr. KALIPADA BISWAS, M.Sc.  
                  { „ ANUTOSH DASGUPTA, M.A.  
                  { „ GIRIJAPRASANNA MAJUMDAR, M.Sc.  
                  { „ SATYASARAN SINHA, B.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Examples should be given from Indian plants as far as possible*

1. Describe, giving as many examples as you know, the different ways in which leaves become modified as organs of (a) climbing, (b) storage. 20
2. Compare the morphology and internal structures of a typical gymnospermous, monocotyledonous, and dicotyledonous seed. 20
3. *Either*, Write an essay on the morphology, distribution, and reproduction of the bamboo plant, and discuss its various uses in arts and crafts and in our everyday work. 20
- Or*, Describe the natural order Leguminosae and discuss the economic importance of the three families under it.
4. *Either*, Describe the formation of (a) lenticels, (b) callus, and (c) resin canals in woody trees, and discuss their functions. 20
- Or*, Describe the formation of secondary elements in the root in dicotyledons and compare it with that of the stem.
5. *Either*, Describe the mode of pollination and development of embryo in *Pinus* and compare with that of a typical Angiosperm. 20
- Or*, Discuss the difference between the somatic and the meiotic divisions in the plant kingdom and explain their significations.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Answer any FIVE questions*

1. Give the life-history of an ascomycete, and point out in what respects it differs from that of a phycomycete. 20
2. Describe with diagrams the structure and reproduction of a blue-green alga. Why is this alga considered lower than the green ones? 20
3. What do you understand by the alternation of generations? Illustrate your answer from the life-history of a fern. 20
4. Give a brief account of how the green plant assimilates carbon. 20
5. Describe the characteristics of the phanerogamic epiphytes as a class. 20
6. Give a brief account of the circulation of nitrogen between the plant kingdom and the outside world. 20
7. What are the factors which influence growth? Indicate the manner in which this influence is produced. 20
8. Classify the various kinds of movements observed in plants, giving examples in each case. 20

## GEOLOGY—HONOURS

## FIRST PAPER

## GEOLOGY AND MINERALOGY

**Paper-Setters—** { MR. D. N. WADIA.  
(Pass and DR. A. M. HERON, D.Sc.  
Honours) { MR. K. K. MATHUR.  
,, S. L. BISWAS, M.A.

**Examiners—** { MR. SARATLAL BISWAS, M.A.  
DR. CYRIL S. FOX, D.Sc.  
,, MANMOHAN CHATTERJEE, B.Sc., Ph.D.,  
A.R.C.S., D.I.C.  
,, M. S. KRISHNAN, M.A., Ph.D., A.R.C.S.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer FIVE questions—at least two from each group*

*The figures in the margin indicate full marks*

## GROUP A

1. Enumerate the coal-fields of India, pointing out the mode of occurrence of coal in them. What is your idea about its origin? 20

2. Explain the processes which lead to the formation of— 20
  - (a) a zone of secondary enrichment in a mineral vein;
  - (b) nitre efflorescence in Bihar.
3. Name the rocks which form the chief building materials in India, and mention the important sources of supply of each, with your remarks on its suitability for use as such. 20
4. Give an account of the iron-ore deposits of India, with a note on their utilization. 20

### GROUP B

5. Explain the modes of formation of the various types of lakes. Cite Indian examples, if any, to illustrate your answer. Describe evidences which indicate the existence of silted-up lakes. 20
6. Describe the possible stages of the life-history of volcanoes. 20
7. What are the distinctive features of—fringing reefs, barrier reefs, and atolls? Give a brief account of the theories propounded to explain the origin of coral reefs. 20
8. Draw neat sketches to illustrate the different types of faults, and describe them. What do you know of the real nature of the 'main boundary' fault of the outer Himalayas? 20

### SECOND PAPER

#### Mineralogy and Petrology

*Candidates are required to give their answers in their own words as far as practicable*

*Answer FIVE questions only*

*The figures in the margin indicate full marks*

1. Explain the methods of determining the sign of a biaxial mineral in sections respectively parallel and normal to the plane of the optic axes. 20
2. Give an account of the minerals of the epidote group. 20
3. Write notes on the following :—(a) hour-glass structure, (b) intersertal texture, (c) directive pressure, (d) magmatic differentiation, and (e) enantiomorphism. 20
4. Describe the physical and chemical properties of the following minerals, and indicate their modes of occurrence in nature :—staurolite, sphene, olivine, cancrinite, and scapolite. 20
5. Give the mineralogical and textural characters of rocks of the lamprophyre group. 20
6. Describe the characters of sedimentary rocks which indicate a shallow water origin. Give examples. 20
7. Explain the manner in which the molecules of the normative minerals are distributed in the actual mineral composition of the more common igneous plutonic rocks. In which rocks do the norm and the mode agree most closely? Give reasons for your answer. 20

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Any FIVE questions out of these carry full marks*

*The questions are of equal value*

1. Give a résumé of the life of the carboniferous period of earth history.
2. Describe, with sketches, the structure and organization of the hard parts of the *Crinoidea*, taking as your example any well-known Mesozoic genus.
3. Give an account of the distribution and geological history of any two of the following :—(a) the mastodon, (b) the Rudistae, (c) the *Glossopteris* flora.
4. Accurately define the following terms, giving examples wherever possible :—homoeomorphs, cryptogenetic types, microspheric forms, genotype, adaptive radiation, ontogeny, katagenesis.
5. Assign to the following fossils their appropriate stratigraphic horizon and systematic position :—*Schizaster*, *Xenaspis*, *Pteria*, *Acanthoceras*, *Tetrabelodon*, *Maclurites*, *Conoclypeus*, *Alveolina*, *Acrothele*, *Danaeopsis*, *Stylina*, *Actinodon*, *Amblypterus*.
6. Give an account of the principal features of the fauna of the South Indian cretaceous.
7. Discuss the palaeontological evidence bearing on the Permian glaciation of Gondwanaland.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions to be answered*

*The figures in the margin indicate full marks*

1. Describe briefly the fresh-water Miocene and Pliocene deposits of India and Burma. 20
2. Give a concise account of the marine cretaceous of Peninsular India. 20
3. State to what divisions of the animal or vegetable kingdoms the following fossils belong, and what geological horizons they characterize :—*Hyænarctus sivalensis*, *Cordaites hislopi*, *Echinostrobus*, *Spirifer Rajah*, *Avicula contorta*, *Belemnites sulcatus*, *Trigonia ventricosa*, *Nautilus danicus*, *Sabal major*, *Pentamerus oblongus*. 20
4. Give, in the form of a table, the subdivisions of the upper and lower Vindhyan systems. 20
5. Describe the sequence of palaeozoic rocks in Kashmir. 20
6. Give the type locality, geological horizon, and characteristic fossils, if any, of the following strata :—Kama stage, speckled sandstones, Chideru beds, Spiti shales, Lipak series, Bonaganapalli beds, Karewas. 20
7. Describe the changes in the distribution of land and water which took place during the tertiary period in India and Burma. 20
8. Give briefly the distribution and ages of the basic lavas and dyke rocks, older than the Vindhyan, in Peninsular India. 20

## GEOLOGY—PASS

## FIRST PAPER

Examiners— { MR. SATYACHARAN CHATTERJEE, M.Sc.  
 ,, BHUPENDRANATH MAITRA, M.A.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Answer SIX questions only*

*The questions are of equal value*

1. Calculate the formula of a mineral which on analysis gives—

SiO <sub>2</sub>	55.0
Al <sub>2</sub> O <sub>3</sub>	23.5
K <sub>2</sub> O	21.5
	<hr/>
	100.0
	<hr/>

Name and describe the mineral.

(O=16, Si=28, Al=27, K=39.)

2. Give the distinctive characters of—barite, argentite, chromite, apatite, calcite, and monazite. State how they are utilized.

3. Define a pseudomorph. Describe the different kinds of pseudomorphs, indicating their modes of formation.

4. What do you understand by the parameter of a crystal face? Explain how Miller indices are derived from the parameters of a crystal.

5. Describe, giving a neat sketch, a petrological microscope, and explain clearly the method of using the instrument.

6. Distinguish between—

- (a) uniaxial crystal and biaxial crystal;
- (b) poikilitic texture and ophitic texture;
- (c) primary minerals and secondary minerals;
- (d) batholiths and laccoliths.

7. Give a scheme of classification of igneous rocks, showing the positions of the following :—peridotite, granodiorite, basalt, andesite, syenite, phonolite, monzonite, and charnockite.

8. Write notes on :—laterite, Bengal gneiss, loess, and Deccan trap.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Any FIVE questions out of these carry full marks*

1. Give a succinct account of the various types of rock-formations met with in the Cretaceous System of India.

2. Assign the following series and stages to their proper stratigraphic horizon. In each case give the principal rock and fossil contents :—salt marl, Umaria limestone, Cuddalore sandstone, iron-ore series, Parsora stage, Chinji series, Wetwin slates, Chharat series.

3. Briefly describe the principal coal-measures occurring in the different provinces of India, and give their respective ages as indicated by their contained fossils.

4. Explain carefully the meaning of these terms :—homotaxy, unconformity conglomerate, marine transgression, autoclastic breccia, peneplain, derived fossils.

5. In a series of diagrams describe the structure of fossil trilobites. Name some genera of trilobites characteristic of the Palaeozoic rocks of India.

6. Give the geological range and the systematic position of the following genera :—*Microdiscus*, *Micraster*, *Voltzia*, *Pterichthys*, *Zaphrentis*, *Monograptus*, *Pentremites*, *Perisphinctes*, *Williamsonia*, *Assilina*, *Stegodon*.

7. Write a note on the important occurrences of igneous intrusive rocks of India and the economic mineral deposits associated with them.

## ZOOLOGY—HONOURS

### FIRST PAPER

DR. EKENDRANATH GHOSH, M.Sc., M.D.,  
F.Z.S.

*Paper-Setters*— { „ GEORGE MATHAI.  
(*Pass and* { „ KARAMNARAIN BAHL, D.Sc.  
*Honours*) { „ D. R. BHATTACHARYYA, M.A., Ph.D.  
                  { „ S. L. HORA, D.Sc.

*Examiners*— { DR. BAINI PRASAD, D.Sc.  
                  { „ S. L. HORA, D.Sc.  
                  { „ HIMADRIKUMAR MOOKERJEE, D.Sc.  
                  { „ H. N. RAY, M.Sc., Ph.D.

*Not more than FOUR questions are to be attempted*

*The figures in the margin indicate full marks*

1. Give a detailed account of the histological elements in sponges. 25
2. Discuss the value of the characters that are taken into consideration in classifying the Protozoa. 25
3. Give an account of the Siphonophora, and discuss their organization. 25
4. Write a short essay on the medical and agricultural importance of the Nematoda. 25
5. Discuss the affinities of the Mollusca with the Annelida. 25
6. Give a comparative account of the larvae of Echinoderms, and point out their relationships with other Invertebrate larvae. 25
7. Estimate the zoological importance of *Limulus*. 25



## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Not more than FIVE questions are to be attempted*

*All questions carry equal marks*

1. Give a general account of the bionomics of *Amphioxus*. Enumerate and comment upon the points of resemblance between *Amphioxus* and *Urochorda*.
2. Write an account of the Weberian ossicles of any fish you are acquainted with. What are their functions and homologies?
3. Describe the modifications undergone by the mandibular and hyoid arches in *Craniata* (except the Cyclostomes).
4. Give a brief account of the *Crocodyliu*, and discuss their distribution in space and time.
5. Characterize the *Ratitae*, and comment upon their geographical distribution. Why is the *Ratitae* regarded as a polyphyletic group?
6. Describe the different types of teeth met with among mammals, and show how far each type of tooth is correlated with the nature of the food of the animal.
7. Write short notes on any five of the following :—(a) *Tornaria*, (b) *Doliolum*, (c) *Palaeospondylus*, (d) *Anabas*, (e) *Axolotl*, (f) *Draco*, (g) *Penquin*, (h) *Lemur*, (i) *Pecten*, (j) *Quadrato bone*.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Only FOUR questions should be attempted*

- |  |    |
|--|----|
| 1. Define Parthenogenesis. Give an account of the various theories which explain the significance of the phenomenon.   | 25 |
| 2. Discuss the modifications induced by presence of yolk on early development in the Chordata.   | 25 |
| 3. Define the term 'placenta.' Give instances you know of the evolution of a placenta in the Metazoa, with a brief account of the structural modification involved in each case. | 25 |
| 4. What is meant by 'linkage' in Genetics, and with what cytological observations can it be correlated?  | 25 |
| 5. Discuss the mode of inheritance of secondary sexual characters together with its evolutionary bearing.  | 25 |
| 6. Write a short essay on Symbiosis among animals.   | 25 |

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Illustrate your answer by drawings as far as possible*

Write an essay on any one of the following subjects :—

100

- (a) Recapitulation Theory.
- (b) Mimicry.
- (c) Origin of Chordata.
- (d) Origin of land animals.

## ZOOLOGY—PASS

## FIRST PAPER

Examiners— { MR. DURGADAS MCSHERJEE, M. Sc.  
                  , TARAKNATH PODDAR, M. Sc., M. B.

## FIRST PAPER

*Candidates are required to give their answers in their  
own words as far as practicable*

*Only FOUR questions should be attempted*

*All questions carry equal marks*

1. Give an account of the life-history of *Monocystis* and compare it with that of the malarial parasite.
2. Give an account of the blood-vascular system of *Pheretima*.
3. Give a comparative account of the mouth parts of insects.
4. Give a classification of the Platyhelminthes, with a descriptive diagnosis of each class.
5. Describe the structure and life-history of a typical Asteroid and compare them with the structure and life-history of a typical Crinoid.
6. Give an account of the respiratory organs and their working in the pond snail *Pila* (*Ampullaria*).

## SECOND PAPER

*Candidates are required to give their answers in their own  
words as far as practicable*

*Not more than FIVE questions are to be attempted*

*All questions carry equal marks*

1. Give an account of the atrium in *Ascidia* as well as in *Amphioxus*. What is the function of the endostyle?
2. Characterize the class *Cyclostomata*, and discuss the relationships of the group.

8. Describe the circulation of blood through the heart of the Frog. In what respects is the heart of the Frog more advanced than that of the *Dipnoi*?

4. Give a brief account of the habits and skeletal peculiarities of the *Chelonis*.

5. Describe the mechanism of respiration in Birds. What is the use of air-sacs to these animals?

6. Which are the principal groups of mammals that have taken to aquatic life? Discuss briefly the structural modifications undergone by them.

7. *Either*, (a) What is the nature of the embryological evidence in support of the theory of common descent? How does the phenomenon of retrograde metamorphosis afford evidence in favour of evolution?

*Or*, (b) What do you understand by 'sexual selection'? How far can it account for the production of 'secondary sexual characters'?

## EXPERIMENTAL PSYCHOLOGY—HONOURS

### FIRST PAPER

*Paper-Setters—*  
(*Pass & Hons.*) { PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
MR. B. C. GHOSH, M.A., M.B., B.C.  
DR. N. N. SENGUPTA, M.A., Ph.D.  
MAJOR J. E. DHUNJIBHOY, M.B., B.Sc., I.M.S.  
DR. GIRINDRASEKHAR BOSE, D.Sc., M.B.  
MR. HARIDAS BHATTACHARYYA, M.A.

*Examiners—* { DR. GIRINDRASEKHAR ROSE, D.Sc., M.B.  
MAJOR J. E. DHUNJIBHOY, M.B., B.Sc., I.M.S.  
PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
DR. NARENDRANATH SENGUPTA, M.A., Ph.D.

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any six questions*

*The questions are of equal value*

1. Discuss briefly the nature and contents of consciousness and self-consciousness. Examine the arguments for and against the subconscious and the unconscious.

2. Discuss some of the views regarding 'meaning'.

3. Write notes on—apperception, interest, desire, and complex.

4. Distinguish between emotion and sentiment. How are they related?

5. What are disposition, temper, and temperament? How do they affect the formation of character?

6. Discuss the nature of belief. What cognitive process remove doubt and establish belief?

7. What opinions have been held about our belief in the reality of things, and why?

8. Mention some important contributions of Wundt, Spencer, Jung, and Kulpe to psychology.
  9. Give an account of the standpoint of the *Gestalt* psychology.
- 

### SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer only FOUR questions*

*The questions are of equal value*

1. Criticize the statement that there are, in animals, both focal and marginal elements in consciousness.
  2. Discuss the influence of practices upon reflex movements.
  3. Expound the psychological interpretation of Weber's law, with special reference to tone-sensations.
  4. Discuss the question whether animals can perceive time-relations or not. Give evidence in support of your answer.
  5. Explain what is meant by kinaesthetic sense. Describe the neurophysiological basis involved in this sense.
  6. Discuss the influence of endocrine organs on emotional tone.
- 

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only SIX questions to be answered*

*The questions are of equal value*

1. Give a résumé of the experiments which prove that perception of tridimensional space is essentially binocular.
  2. Fully describe the constant method in any field of experiment.
  3. Which of the physical changes in attention can be effectively studied in the laboratory? Discuss their relative reliability as tests of attention.
  4. Indicate the different phases of a learning curve. How would you explain them?
  5. Write a short note on the nature and method of mental measurement.
  6. Discuss the relative merit of the different methods for determining the image type of an individual.
  7. Write notes on—photo chromatic interval, terminal and initial inhibition, sthenic and asthenic emotions, motor attunement.
  8. Suggest simple tests for studying a person's capacity for inhibition either in the field of association, or in the field of movements.
- 

### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any SIX questions*

*The questions are of equal value*

1. Briefly describe chief methods of the experimental investigation of emotions.

2. Describe the method you would adopt in obtaining a mental work curve of a person.

3. What is meant by dark adaptation? Give a brief description of its mechanism.

4. Write what you know about 'time errors' and 'space errors'. How are they determined and possible avoided?

5. Describe all that you know about 'distraction'. Can you measure attention in terms of distraction? If so, how?

6. Explain fully the phenomenon of 'beats'.

7. Describe in brief the different kinaesthetic sensations, and mention their respective location.

8. Discuss briefly the causes, however controversial, of the apparent increase in the size of the sun and the moon at the horizon.

## EXPERIMENTAL PSYCHOLOGY—PASS

### FIRST PAPER

#### GENERAL PSYCHOLOGY

Examiners—{MR. HARIDAS BHATTACHARYYA, M.A.  
DR. SUHRIDCHANDRA MITRA, M.A. (CAL.), PH.D.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Explain the function of any five of the following :—*thalami optici*, frontal lobe, Broca's centre, organs of Corti, Pacinian corpuscles, retinal rods, thyroid gland, cerebellum.

2. Distinguish sensation from feeling, and discuss whether will can be regarded as a psychological element.

3. How is instinct related to emotion? How would you classify instincts?

4. How is an emotion conditioned? How can it be unconditioned? Illustrate your answers.

5. Give at least three examples of geometrical illusion and attempt psychological explanation of each. Explain how a stereoscope produces a illusion of solidity.

6. Can all voluntary actions be reduced to the ideomotor type?

Is there any introspective proof of the freedom of the will? If not, on what is the belief based?

7. Distinguish hypnosis and dream. Discuss how far each can be related to the unity of the self.

8. Discuss the nature of attention as determined by experiments, and illustrate its different forms.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any SIX questions*

*All questions carry equal marks*

1. Discuss the limitations of introspection in a psychological experiment.
  2. Classify sensations and mention the characteristics of each.
  3. Distinguish between adaptation and fatigue and indicate the role played by each in psychological experiments.
  4. Can you measure sensations quantitatively? Give reasons for your answer.
  5. Write a short essay on Weber's law.
  6. How would you proceed to investigate the range of attention and what results would you expect to get from your experiments
  7. What factors determine the perception of the third spatial dimension?
  8. Describe the different types of reaction in a reaction time experiment.
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## ANTHROPOLOGY—HONOURS

## FIRST PAPER

*Paper-Setters—* { RAI BAHADUR SARATCHANDRA RAY, M.A., B.L.  
(*Pass & Hons.*) { DR. BIRAJASANKAR GUHA, M.A., PH.D. (HARVARD).  
                              { MR. KSHITISPRASAD CHATTERJEE, M.A.

*Examiners—* { DR. BIRAJASANKAR GUHA, M.A., PH.D. (HARVARD).  
(*Pass & Hons.*) { RAO BAHADUR L. K. ANANTHAKRISHNA IYER, B.A., L.T.  
                              { MR. PANCHANAN MITRA, M.A., PH.D.  
                              { RAI SARATCHANDRA RAY, BAHADUR, M.A., B.L.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FOUR questions*

*All questions carry equal marks*

1. What do you know of the recently discovered Peking Man? How far has its discovery thrown fresh light on our knowledge of early man?
  2. Do you regard the Head Form as a reliable racial test? How far do you think it is subject to the influence of environment?
  3. What is the difference between the Fundamentalists' and the Evolutionist's standpoints of the origin of man? Who is, in your opinion, right, and what are your reasons?
  4. What is the time of the advent of the Neanderthal Man in Europe? What do you know of his physical characters and life?
  5. Among the living Primates whom do you consider to be nearest to Man? Give full reasons for your views.
  6. Write a short note on the cranial characters of the race or races associated with the Aurignacian culture in Europe.
-

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FOUR questions need be attempted, of which Question 1  
must be one*

*The figures in the margin indicate full marks*

1. Discuss the value of the term 'race' in the classification of peoples. 28  
Indicate the utility of (a) culture, (b) language, (c) skin colour, and (d) hair as the basis of classification.
2. Write a short note on the racial types in South India. Discuss 24  
the theory of 'Scythian' admixture in the Decan.
3. Indicate and discuss the current views regarding the origin of the 24  
Rajputs and other people of the same ethnic stock in Hindustan.
4. Write a short note on the racial types in palaeolithic Europe. 24  
Indicate briefly how far these have entered into the composition of the modern European peoples
5. Write a note on Semitic migrations in Asia Minor. Discuss the 24  
theory of Nordic admixture put forward to explain the fair hair and fair skin met with amongst Jews.
6. Indicate the characteristics and distribution of the Indonesian 24  
(Nesiot) type in the East Indian Archipelago. Discuss the racial and cultural effects (if any) of migrations from India and China.
7. Write a short note on the racial history of North East Africa, with 24  
special reference to Egypt.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions are to be attempted*

*The questions are of equal value*

1. Describe the main features of the mural engravings and paintings of the palaeolithic caves of western Europe. Indicate a possible motive for their execution.
2. Give an account of the prehistoric cave-paintings found in India, and discuss their probable age.
3. Give an account of the following cultures :—(a) Swiss lake-dwellings, (b) Halstatt or La Tène.
4. Describe the principal methods of making pottery. How did the discovery of the potter's wheel affect any other art or arts?
5. Describe the principal types of artificial deformation, distinguishing, where possible, the purposes which they appear to serve. Indicate the distribution of any one of the principal types of deformation practised.
6. Describe the various primitive methods of fire making; indicate their geographical distribution. Give at least one instance of the ceremonial survival of such a mode in a higher civilization.
7. Write a short note on the probable origin of plough cultivation, indicating the different steps.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions need be attempted*

*The figures in the margin indicate full marks*

1. Write an essay on caste in India. Discuss the different theories of its origin, and indicate your own views. 20
2. Write a note on the distribution of cross cousin marriage in India. Discuss the theories of the origin of this type of marriage. 20
3. Discuss the value of kinship terms in the analysis of social organizations. Give examples from India. 20
4. Define (a) polyandry, (b) levirate, indicating the different varieties of each institution, and their distribution in India. 20
5. Write a short note on animism. Indicate how the primitive belief survives in the higher forms of religion. Give at least two Indian examples. 20
6. Write a short note on the more common modes of disposal of the dead. Discuss the value of the associated ceremonies in elucidating the underlying beliefs in life after death. 20
7. Write a short note on totemism, discussing the different views expressed with regard to it. 20

## ANTHROPOLOGY—PASS

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only FIVE questions are to be attempted*

*All questions carry equal marks*

1. What is the object and scope of Anthropology? How far can it be of use in practical life? 20
2. How would you define Race? From the anthropological point of view can you equate it with either culture or language? 20
3. Discuss Darwin's theory of the origin of Man. How far can his views be accepted in the light of present knowledge? 20
4. What are the racial affinities of the American Indian? Can you regard him as a separate race? 20
5. Describe the physical characters of the Bushmen of Africa. Do you know of any modern or prehistoric race with whom it is somatically allied? 20
6. Explain what you understand by Dinaric Race. What are its peculiarities, and where does it occur most? 20
7. Write short notes on any three of the following :—(a) Peking Man, (b) Pithecanthropus Erectus, (c) the Eskimo, (d) the Bantu (e) Cephalic index. 20



## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only FIVE questions need be attempted*

*The figures in the margin indicate full marks*

1. Write a short note on the remains of man in the palaeolithic age in Europe, briefly indicating the characteristics of each type of culture. 20
  2. Discuss the significance of the cave art of the palaeolithic time in Europe. Do you know of any Indian examples of primitive cave drawings? 20
  3. Define clan. Discuss its probable origin among a people passing from the 'gathering' stage to cultivation of food plants. 20
  4. Write a short essay on animism. Indicate how the primitive belief persists in higher types of religion. Give examples from India. 20
  5. Discuss the value of folk-rite (*brata*) and folk-lore in the study of the early culture of a people. Give examples. 20
  6. Write a brief note on the value of kinship terms in the analysis of social organization. Give examples. 20
  7. Write a short note on the probable origin and development of plough cultivation. Illustrate your arguments. 20
  8. Write a note on the concept of justice and its administration among primitive people. 20
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# B.Com. Examination, 1933

## BENGALI COMPOSITION

*Paper-Setter*— { MR. SYAMAPRASAD MOOKERJEE, M.A.,  
B.L., BARRISTER-AT-LAW, M.L.C.

*Examiner*—DR. TAMONASCHANDRA DASGUPTA, M.A., PH.D.

*The figures in the margin indicate full marks*

1. Translate into Bengali *any two* of the following :—

(a) Another form of money which has been used extensively in modern times is paper money. This usually consists of written promises to pay on demand, given by banks or by the government. People take these promises to pay and use them as money. They believe that the promise will be kept. They think that others will accept them without question. They know that the notes must be accepted for debt unless otherwise expressly stipulated by contract. 20

(b) How are goods saved? We may save goods in such a way that neither we ourselves nor others can enjoy them in the present. Thus it is claimed that the peasants of France are so distrustful of Banks that they lay by or hoard their savings in secret places about their homes. Such saving, though it is not the best, is better than harmful or luxurious consumption. If the goods, for instance money, be stored away in such a manner that they will not suffer harm, they may in the end minister to real and commendable wants. 20

(c) The subject of luxury is a difficult thing to discuss, since a definition of the thing itself is by no means easy. Many things are to-day easily obtainable by the poorest which two centuries ago could be enjoyed only by the most wealthy and powerful. Such things are never thought of as luxuries in modern days. Again, to the illiterate man a library is a luxury; to the scientist it may be a necessity for complete efficiency. These illustrations show the difficulty of reaching a simple and clear definition of luxury. 20

2. Give the Bengali equivalents for following expressions :— 10

(a) Life Assurance, (b) Dividend of a company, (c) Commercial aviation, (d) Wholesale merchant, (e) Compound interest.

3. Write an essay *one* of the following subjects :— 30

(a) The taxable capacity of a country.

(b) Export of gold from India.

(c) The need for the establishment of a Reserve Bank in India.

(d) The revival of Indian cottage industries.

4. Translate the following into English :—

20

आजकाल विज्ञान द्वारा वे कत असाधारण साधन हईयेहै, ताहा बह लोकेर कुत्र चेटौर फले। माहुर पूर्वे एकान्त असहाय हिल। बुद्धि, चेटा ओ सक्षिप्तार बले आज से पृथिवीर बाणा इहैराहै। कत कठे ओ कत चेटौर पब मनुष्य वर्तमान उन्नति लाभ करियाहै, ताहा आभरा मनेओ करिते पारिना। के प्रथम आशुन ज्ञानाटेते शिनाहैल, के प्रथम धातुर बावहार शिक्का दिल, के लेखार प्रथा आविष्कार करिल, ताहा आभरा किछुई जानिना। ऐहियात्र जानि बे, प्रथमे बाहाग कोन नूतन प्रथा प्रचलन करिते चेटा करियाहिलेन, ताहारा पदे पदे अनेक बाधा पाहियाहिलेन।

## HINDI COMPOSITIONS

*Paper-Setter*—MR. GULAB RAY, M.A.

*Examiner*—MR. NALINIMOHAN SANYAL, M.A.

*The figures in the margin indicate full marks*

1. Please render any one of the following passages into English :—

15

(a) ऊपर कहा जा चुका है कि, फार्मों द्वारा भूमि की उत्पादक शक्ति को बढ़ाने के लिये रूस अमरीका की होड़कर रहा है ; लेकिन दोनों के साधन और मार्ग एक से होने पर भी रूस और अमरीका के उद्देशों में बहुत इतर है। अमरीका की भूमि पूंजी पतियों के आधान है। रूस लोग उसमें मजदूरी करके अपने पेट पालते हैं ; लेकिन रूसी फार्मों में रूस के प्रत्येक किसान का बराबर का भाग रहता है। अमरीका में जहा कृषि फार्मों द्वारा ग्रामीण जीवन नष्ट हो रहा है, वहां रूस देहाती जीवन को बरकरार रखते हुए उसीको उन्नतशील बनाने का प्रयत्न करता है।

(b) भारत में मजदूरों की कोई खास श्रेणी नहीं है। अतएव वे विशेष ज्ञान तथा अपने काम में कार्यपटु नहीं होते हैं। वे अनियमित रूप से काम करते हैं। जब चाहते हैं काम करते हैं, जब चाहते हैं अनुपस्थित रहते हैं। उनके बालबच्चे भी घर ही पर रहते हैं, इसलिये भी वे अधिक समय के लिये काम छोड़कर घर चले आते हैं। खासकर इसलिये और भी कि वे अपनी अल्प आमदानी के कारण अपने परिवार की शहर में साथ नहीं रख सकते।

भारतीय मजदूर को मशीन का काम सीखने में बहुत समय लगता है। मशीन और नये नये आविष्कार जहां उसके लिये अनोखी चीजें हैं

वहाँ वे अंगरेज मजदूरों के लिये घर की नित्य की चीज़ें हैं। अतएव इस कारण भी इंग्लैंड के मजदूरों की अपेक्षा भारत का मजदूर कम कार्य-कुशल होता है।

2. Construct short sentences in Hindi, using the following phrases :— 15

(a) दान्त खट्टे कर दिये ; (b) कान काटता है ; (c) बाल की खाल ; (d) रङ्ग में भङ्ग ; (e) दूध का दूध पानी का पानी।

3. Please explain the underlined phrases in the following passages :— 15

मैं नहीं जानता था कि भाग्य मेरा सहारा न देगा और मुझे दर दर मारा फिरना पड़ेगा। लेकिन क्या किया जावे विधाता से वश नहीं चकता कर्म को रेखा किमी के मिटाए नहीं मिटती आखिर मैंने निश्चय किया कि मैं घरदार का मोह छोड़ आत्महत्या कर लूँ। आँख फूटे पीर जाय लेकिन गुरुजनों ने आत्महत्या को कामरता कहा है। लोग कहते हैं कि घूटे के भी दिन फिरते हैं इसी आशा ने मुझे आत्महत्या के अपराध से बचा लिया।

4. Please translate :—

15

देश के बड़े और छोटे धन्धों के लिये औद्योगिक बैंको की अत्यन्त आवश्यकता है, बहुत से भारतीय धन्धे इसी लिये नहीं पनप पाते कि उन्हें चलाने के लिये उत्पादकों को उपयुक्त पूँजी सुभीते से नहीं मिलती। भारतवर्ष को विस्तृत पैमाने पर वैज्ञानिक ढंग से अपने उद्योगों का संगठन करना है। पूँजी छोटै व बड़े सभी धंधों के चलाने के लिये ही नहीं चाहिए, बल्कि माल की खपत के लिये भी। इसी लिये भारतवर्ष में औद्योगिक बैंको की अत्यन्त आवश्यकता है।

5. Please develop the idea contained in the following passages. (The answer should be given in Hindi) :— 15

It was asked of old, ' Did the owl come out of the egg or the egg out of the owl? ' Which is first, the embryo out of which the perfect organism is evolved, or the perfect organism from which is born the embryo? A somewhat similar question might be put about the State and the individual. Are we to think of the State as something built up by individuals for their own ends, like a house in which they may dwell, or a temple in which they may serve God? If so, we are face to face with the difficulty that the individual as we know him, is largely the creation of the State. Not only almost all his wealth but much of what is closer to his personality, depends upon the action of the State. It is the State, and what depends on the State, that makes the difference between civilization and savagery. Without the State therefore, physical health would have to conform to quite different conditions, and intellectual cultivation would scarcely exist at all.

6. Translate into Hindi any one of the following passages :—

15

(a) What is wanted in order to keep men full of vitality is opportunity, not only security. Security is merely a refuge from fear, opportunity is the source of hope. The chief test of an economic system is not

whether it makes men prosperous, but whether it leaves men's instinctive growth unimpeded. To achieve this purpose there are two main conditions which it should fulfil: it should not cramp men's private affections, and it should give the greatest possible outlet to the impulse of creation.

(b) Another and even more striking feature of trade fluctuations is their periodicity. They recur with a certain degree of regularity. Trade depressions are not perfectly periodic, but they are not dispersed in an altogether irregular way. A degree of periodicity seems to rule in the midst of mock irregularity. It usually happens that an interval of some seven, or ten and a half years, or thereabouts, intervenes between the culminating points of two periods of bad trade. The explanation of this curious circumstances has been attempted by many economists, but it cannot be said that as yet it has been quite satisfactorily accounted for.

(c) Put it must be remembered that all land is not of equal value, some soil will grow much better crops than other soil; some fields have a good water supply, and others none; some land is near a railway station or a town, and is valuable not only for farming but for building upon. Land of this kind is worth more and will fetch more if the landlord is prepared to sell his right to his possession. Therefore, he will ask a tenant more rent for it, and the tenant will be willing to pay more, if, in his turn, he thinks himself able to make more profit out of it. If a farm containing very good land, or near a railway station or a town, is to let, there will be more farmers wanting to take it than will want to take a poorer farm, and they will offer higher rent for it.

7. Write a short essay in Hindi, discussing *any* of the following 25 subjects:—

- (a) The effect of Imperial preference on Indian Industries.
- (b) The difficulty of an Indian agriculturist and the ways and means of remedying them.
- (c) The problem of cottage industries; can they develop in the face of mill industries?

## URDU COMPOSITION

*Paper-Setter*—SHAMS-UL-ULAMA HIDAYET HUSAIN, KHAN  
BAHADUR, F.A.S.B.

*Examiner*—SANAUL-MULK SYED MD. SADIQ

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Urdu:—

40

(a) Bahadur Khan was near Delhi when the letters from Khudabunda Khan, intimating the death of Muzaffer Shah, reached him; and at the same time he received a deputation from the Afghans of Jaunpur, entreating him to assume the Government of that country. In order to satisfy both parties, he promised to pursue whatever direction his horse might take, and throwing the reins upon the animal's neck it took the road to Gujrat. On his arrival at Chitaur he was joined by his two brothers, Chand Khan and Ibrahim Khan, who gave him the first information of assassination of the late King, Sikandar Shah, after which event they had fled, and taken refuge with the Rana. Chand Khan preferred remaining at Chitaur, but subsequently went to Malwa, while Ibrahim accompanied Bahadur Khan. At Poloh he was joined by the Raja Oday Singh, and also

by a few of the personal adherents of the late King, among whom were Mallik Sarwar and Yusuf Khan.

(b) Mahmud Lunga having collected his army marched towards Sheevur to reduce his revolted minister; but the latter, and his son Alam Khan, quitting Sheevur, proceeded to the Ravi, and applied to Daulat Khan. Before he arrived, however, the contending armies were absolutely engaged. Daulat Khan, on reaching the ground, sent some respectable officers to Mahmud Lunga; and it was eventually agreed that the river Ravi should form the boundaries between the country of Jam Bayazeed and Mahmud Lunga. After which Daulat Khan, having accompanied Mahmud Lunga to Multan, also visited Jam Bayazeed at Sheevur, whence he returned to Lahore.

2. Explain :—

10

کیا وہ نمرود کی خدائی تھی  
بندگی میں مرا بہلا نہ ہوا

قطع کیجئے نہ تعلق ہم سے  
کچھ نہیں گر تو عداوت ہی سہی

3. Translate into English :—

20

زمانہ قدیم میں ملک یونان کی ایک سرسبز وادی میں  
ایک گاؤں تھا جہاں کے لوگ بڑے آسودہ حال تھے۔ تقریباً تمام  
گاؤں کے لوگ شام کے وقت اپنے روزانہ کاروبار سے فارغ ہو کر  
سیر کا لطف اٹھانے کے لئے باہر نکلتے تھے مگر بارگود ان نعمتوں  
کے وہ بڑے لالچی اور سگدل تھے۔ اگر کوئی مصیبت کا مارا  
مسافر اس گاؤں میں آتا اور روٹی پانی کا طلبگار ہوتا تو یہ  
لوگ اس کے ساتھ سختی سے پیش آتے اور نہایت برا برتاؤ  
کرتے۔ خاص کر مقررین کے ساتھ بڑی سختی سے پیش آتے۔  
چنانچہ ان کے سدھائے ہوئے کتے بیچارے مسافروں اور غریب  
فقیروں پر بھونکتے اور کاتنے کو دڑتے اور ان کے شریر بچے غریب  
مسافروں پر پتھر برساتے \*

4. Write an essay in Urdu on one of the following subjects :—

30

(a) Causes of economic depression in India.

(b) Jute growing in Bengal.

(c) قطرہ دریا میں جو ملجائے تو دریا ہو جائے

کام اچھا ہے رہی جسکا مآل اچھا ہے

## MALAYALAM COMPOSITION

*Paper-Setter*—MR. K. ZACHARIA*Examiner*—MR. C. E. ABRAHAM, M.A.*Candidates are required to give their answers in their own words  
as far as practicable**The figures in the margin indicate full marks*

1. Translate one of the following passages into idiomatic English :— 20.

(a) ഇപ്പോഴത്തെ സാമ്പത്തിക ക്ഷയം നിമിത്തം നാം ശതമാനം ജനങ്ങളും മനസമാധാനമില്ലാതെ ദിവസങ്ങൾ പോകുന്നു. കഴിഞ്ഞ സെൻസസിൽ സാമ്പത്തിക സർവ്വേ നടത്തിയെങ്കിലും രാജ്യത്തെ വൊതുധനസ്ഥിതി ഇതേവരെ വെളിപ്പെട്ടിട്ടില്ല. അന്നു ഒരുത്തരും യഥാർത്ഥ ശോച്യാവസ്ഥ വെളിപ്പെടുത്തിയിട്ടില്ലെന്നാണ് ഈ ലേഖകൻ തോന്നുന്നത് ഭരിപക്ഷഭരി സുഖമാണല്ലോ രാജ്യഭരണത്തിന്റെ ആദർശം താഴെപ്പറയുന്ന നിയമം നടപ്പിൽ വന്നാൽ സർവ്വജനങ്ങളും സമാധാനം അനുഭവിക്കാൻ ഇടയാകും. കടം ഏല്പാം മോചിക്കണം ഉത്തമണ്ണന്മാർ അധമണ്ണന്റെ സ്വതന്ത്രരായി വിടണം. ഇതു എല്ലാവരും അനുവർത്തിച്ചാൽ രാജ്യത്തിലെ ധനത്തിനു നാശമില്ലെന്നു മാത്രമല്ല എല്ലാവരും സ്വതന്ത്രരും ഉത്സാഹഭരിതരും ആയിത്തീരും.

(b) പ്രകൃതിദേവി നല്ലപോലെ അനുഗ്രഹിച്ചിട്ടുള്ള ഈ കേരളക്കരയിൽ താമസിക്കുന്ന നമുക്കു അടുക്കളതോട്ടങ്ങൾ വെച്ചുനടത്താൻ പേണ്ട സൗകര്യങ്ങളെല്ലാം ഉണ്ടായിരുന്നിട്ടും അതിനു അധികം പേരും ഒരുമ്പെടാ

ത്ത വലിയൊരു നിക്ഷേപമാണു നമ്മുടെ പുരാതന ഗ്രാമങ്ങൾ തന്നെ നിർമ്മിച്ചിട്ടുള്ളതു ശാസ്ത്രദൃഷ്ട്യാ നോക്കുകയാണെങ്കിൽ ഈ തോട്ടങ്ങൾ ഉണ്ടാക്കുന്നതിനു ഏറെയും യോജിച്ച വിധത്തിലാണു. എന്നെന്നാൽ തെക്കു ചാഞ്ഞ ഭൂമി നിറുത്തിയുള്ളതോളം വിടുപണി ചെയ്യുന്നതിനു - ഉപയോഗപ്പെടുത്തുന്നില്ല. അടുക്കള നൊട്ടത്തിനു സ്ഥലം നിശ്ചയിക്കുന്നതിനു. തെക്കു ചരിഞ്ഞ ഭൂമി കൊള്ളുകയില്ല. എന്നു മാത്രമല്ല തെക്കു പൊങ്ങിയും വടക്കു ചരിഞ്ഞും ഇരിക്കണമെന്നു കൂടിയുണ്ടു.

2. Translate any two of the following passages into Malayalam :— 40

(a) These shares are always being bought and sold and their price is always going up and down. Those who are prudent or lucky buy when they are low and sell when they are high, and those who are rash and unlucky the opposite. Even those who do not want to gamble must do so, whether they will or not; for there is nowhere any real security, since at any moment the shares in any concern may become worthless or may rise to a fabulous amount. So extensive and all-pervading is this business of gambling that a whole class of men live by conducting it. But never do they touch, even remotely and from a distance, the actual business on whose fluctuations all their fortune depends.

(b) The establishment of a right relationship between Knowledge and Power is the central problem of modern democracy. Upon it, more than upon any other single factor, depends the realisation of democracy as an effective method for the conduct of public affairs. Is it possible for the common elector actually to exercise control over the operations of government? Can he have the knowledge, the experience, or the opportunity for influencing the decisions of those who occupy the seat of power? Or must we cease to conceive of democracy as a participation by the ordinary citizen in the work of government and acquiesce in a definition under which it means no more than that the elector exercises a choice at stated intervals between two or more rival groups of rulers?

(c) Industries which have the best chances of organization on a small scale are those in which the demand for the product is limited to particular classes or localities. In the case of artistic handicrafts and decorative industries which produce costly commodities for the rich few the larger producer finds it impossible to compete with the small producer because of the limited market. Some consumers refuse to accept the common standardised machine goods and their individual tastes have to be satisfied. The essence of art is individuality and things of exquisite workmanship always bear the impress of the maker's personality, and, in such cases, handicrafts have a distinct advantage over large-scale machine production.

3. Write an essay in Malayalam on one of the following topics :— 40

- The case for and against unemployment relief.
- The economic functions of Banks.
- The causes of depressions in trade and industry.



## TAMIL COMPOSITION

*Paper-Settler & Examiner*—RAO BAHADUR L. K. ANANTHAKRISHNA  
IYER, B.A., L.T.

*Candidates are required to give their answers in their own words  
as far as practicable*

1. Translate *any two* of the following passages into tamil :—

(a) Money does its work by being turned into something else. When we spend it we turn it into the goods and services that we need or want. When we lend or invest it, we turn it into a promise to pay, or into a share in the property or profits of a company. If we hoard it, the fact that we have got it gives us a sense of satisfaction and safety, but only because we know or believe that if a rainy day comes, it is there, ready to be turned into anything that we want, up to the extent of its buying power. By doing this work money saves us from the difficulties and inconveniences of barter and enables us to enjoy the blessings of commerce and division of labour on an extended scale.

(b) If men made everything for themselves, they must have been handy men of great versatility and range of skill, but it was most unlikely that the result was pleasant. Even the whole family working, it is probable that the hut was damp and draughty, the clothing was uncomfortable, unbecoming, and short-lived, and the food, besides being often far from plentiful, was either too fresh or too far gone. If a wider range of enjoyment was either attempted by what is known as barter, under which goods were exchanged for goods, tiresome barriers are found to check the working of the system. The butcher would have more meat in his shop than he himself has consume and the brewer and baker would each of them be willing to purchase a part of it.

(c) Jevons gives a better example which is not a fancied picture of what might have been but a real event. He relates that Mlle. Zolie, a French singer, in the course of a tour round the world, gave a concert in the Society Islands. Her share of the receipts consisted of three pigs, twenty-three turkeys, forty-four chickens, five thousand cocoanuts, and large quantities of bananas, lemons, and oranges. She calculated that if her share had been sold in Paris, she would have got four thousand francs which would have been good pay for the five songs she had sung. As it was, part of her gains had to be used to keep the other part alive until consumed, the livestock being fed on the fruit.

2. Write a short essay, not exceeding four pages, on *any one* of the following subjects :—

- (a) The economic condition of your village and how to improve it.
- (b) Coconut cultivation.
- (c) The Handloom Industry.

3. Write a letter to your guardian at home, describing the outstanding features of commercial life in Calcutta.

## GERMAN COMPOSITION

*Paper-Setter*—DR. STELLA KRAMRISCH, D.LITT.*Examiner*—DR. K. S. GANGULI, B.SC., DR.ING. (MUNICH)*The figures in the margin indicate full marks*

## 1. Translate into English :—

25

Wir haben heute den Betrag unseres Guthabens bei ihnen durch die Berliner Bank auf Sie entnommen.

Wollen Sie der Tratte bei Vorkommen den nötigen Schutz angedeihen lassen und uns wieder mit ihren geschätzten Anträgen beehren, wenn Sie weitem Bedarf haben.

Unser Reisender wird sich erlauben, von Zeit zu Zeit bei ihnen vorzusprechen, um etwaige Aufträge entgegen zu nehmen.

## 2. Translate into German :—

25

The turnover of this bank rose in the last year a quarter against the previous year. About the customs duties proposed in the budget there are strange rumours in circulation.

From the statistical reports about the exportation of coal, people want to deduce that an export duty on coal is imminent.

## 3. Translate into English :—

25

Ein Bettler erhielt sehr wenig Almosen. Um seine Einnahmen zu vergrößern, stellte er sich stumm. Jemand, der ihn vorher gekannt hatte den Betrug bemerkt. Um den Schwindler bloss zu stellen, ging er zu ihm hin, und fragte, während er ihm ein Geldstück gab: Wie lange sind Sie schon stumm? Der Bettler, der auf diese Frage nicht vorbereitet war, antwortete; Seit meiner Geburt.

## 4. Translate into German :—

25

Thereupon the gentleman opened the purse and noticed in it a silver cross. 'Yes, this purse is yours,' he said and handed it him. Then the young man turned back, and they went together towards the city. Soon the young man told the gentleman his wish. He hoped he would find a situation in the city. 'What sort of one?' asked the gentleman.

## FRENCH COMPOSITION

*Paper-Setter*—DR. HIRENDRALAL DE, M.A.*Examiner*—MR. N. N. CHANDRA, M.A.*The figures in the margin indicate full marks*

## 1. Translate into English any two of the following :—

35

(a) Le navire même auquel je vais confier cette lettre vous portera les ouvrages que vous m'avez prié de vous procurer, mon ami. C'est avec joie que je me suis acquitté de cette mission, j'y ai même, et n'y voyez que surcroît d'amitié, relu, avant de les confier à l'emballleur, ces doctes traités, essais, précis, mémoires et autres discours qui vont désormais orner votre solitude et dont j'attends, comme vous, merveilles, car je vous sais homme de sang-froid. Et voilà : le paquet ficelé, je me hâte de vous écrire, tant comme s'il me tardait de mêler une goutte de vinaigre à ces flots de nectar, tout comme si je voulais, à la dernière minute, piquer dans l'éclatant bouquet une sombre et inquiétante petite fleur de scorfulaire.

(b) C'est à Lénine qu'on attribue le grand changement survenu dans la politique intérieure et extérieure de l'Union quand il parut évident que la révolution resterait limitée à la Russie et que les puissances d'Occident l'avaient conjurée sur leur territoires. J'admire qu'une décision si sage—c'est du revirement de Lénine que je parle—ait pu succéder, dans le même esprit, à une espérance aussi folle. Cette seconde révolution, en quelque mesure révolution morale, a mobilisé l'université, le théâtre, le cinéma, bref tous les organes susceptibles d'exercer une pression sur l'âme solitaire ou sur l'âme collective.

(4c) C'était le signal d'une visite.

Valentine regarda la pendule.

—Il est midi, dit-elle, c'est aujourd'hui samedi, bon papa, c'est sans doute le docteur.

Noirtier fit signe qu'en effet ce devait être lui.

—Il va venir car il faut que M. Morrel s'en aille n'est-ce pas, bon papa?

—Oui, répondit le vieillard.

—Barrois! appela Valentine, Barrois, venez.

On entendit la voix du vieux serviteur qui répondait :

—J'y vais, mademoiselle.

—Barrois va vous reconduire jusqu'à la porte, dit Valentine à Morrel; et maintenant, rappelez vous une chose, c'est que mon bon papa vous recommande de ne risquer aucune démarche capable de compromettre notre bonheur.

2. (a) Correct the grammatical mistakes in the following :— 10

Je trouve dans celle-ci, sous les couleurs le plus douces et les apparences le plus gracieuse, les prémices de grand et d'admirable nouveautés. Elle me fais songer à l'aurore.....

(b) When are the present subjunctive and conditional moods used in French? Give three examples of each. 5

3. Translate the following into French :— 30

They say that the French are not a commercial people. They have no commercial genius. They make inventions but have no patience to use them for industrial purposes. The little industry, they have, is meant for their own country. They are never anxious to place their goods in foreign markets. It is either due to their laziness or to the agricultural wealth of France. The soil of France is rich and yields the largest quantity of grapes, apples, and different kinds of vegetables. As the French are generally home-loving they are found of sticking to their fields and living a modest and contented life.

4. Write a letter in French to your father, explaining to him the reasons which have induced you to go up for commercial education. 20

## GENERAL ECONOMICS

Paper-Setter—SIR J. C. COYAJEE, KT., B.A., LL.B.

Examiner—DR. HIRENDRALAL DE, M.A.

*The questions are of equal value*

*Six questions only to be attempted*

1. There is not any one method which can properly be called the method of Economics, but every method must be made servicable in its proper place and illustrate this proposition.

2. Indicate the limits of large-scale production in (a) manufactures, and (b) agriculture.

3. 'The theory of prices may be regarded as the central problem of economic study forming the key to the understanding of all other economic phenomena.' Discuss this proposition.

4. Contrast the considerations which weigh with (a) the monopolist, and (b) the producer, under competitive conditions in fixing the prices of their commodities.

5. Trace the effects of extensive improvements in agriculture on the interests of (a) the landlord, (b) the labourers and (c) the community.

6. Point out the chief analogies and the essential differences between Rent and Interest.

7. In what ways is the value of money determined differently from that of other commodities?

8. What considerations influence the banker in determining the character, the composition, and the amount of his reserve?

9. Why is it necessary to formulate a theory of International trade distinct from that of Domestic trade?

## INDIAN ECONOMICS

*Paper-Setter*—DR. PRAPHULLACHANDRA BOSE, M.A., PH.D.

*Examiner*—MR. NRIPENDRANATH DATTA, M.A.

*Attempt ANY FIVE questions*

*The questions are of equal value*

1. Briefly describe the effect of geographical configuration upon the variation of rainfall in different parts of India, and show how it affects the distribution of crops over India.

2. Broadly classify the systems of land tenure in India, and examine the advantages and disadvantages of the permanent and temporary settlements of land revenue. If you had a clean slate, which would you prefer for Bengal?

3. Explain the reactions of a low standard of living upon productive efficiency. How do the institutions of joint family and early marriage affect the standard of living in India?

4. Estimate the mineral and water-power resources of India. What steps would you suggest to improve their exploitation for purposes of increasing the wealth production of India?

5. Summarize the benefits which India derives from the organization of rural co-operative credit. Suggest some lines of improving the present system.

6. What do you think are the permanent effects of a change in the value of the rupee? Would you maintain its value in terms of the sterling, or gold, or purchasing power parity?

7. Describe the functions of the Imperial Bank of India. To what extent does it fail to serve as a central bank?

8. Critically examine the principles according to which the sources of revenue have been allotted to the Central and Provincial Governments. Explain the financial effects of the present system upon Bengal or any other province with which you are familiar.

9. Carefully explain the conditions which you will require an industry to satisfy before it should be granted protection by a tariff. Illustrate your answer with an important industry which satisfies your conditions.

## ECONOMIC GEOGRAPHY

*Paper-Setter*—MOHITKUMAR GHOSH, M.A., B.Com.*Examiner*—DR. MANMOHAN RAY, M.A.*Answer ANY SIX questions**The questions are of equal value*

1. Examine the physical conditions that are characteristic of the great world fishing grounds. Illustrate your answer by examples.
2. Compare and contrast the conditions of inland water transport in England and in Germany.
3. Compare the position and importance of the chief ports on the Mediterranean and Atlantic coasts of Europe.
4. Estimate and locate the mineral wealth of China.
5. Discuss the influence of geographical factors on the localization of industry. Illustrate your answer by examples.
6. Describe and account for the characteristics of (a) a Mediterranean climate, (b) a Monsoonal climate.
7. Write a note on the cotton industry of India.
8. Examine the present economic condition of South Africa, with reference to (a) mineral resources, and (b) pastoral industry.
9. To what extent, in your opinion, is the commercially backward state of India to be ascribed to geographical causes? Give reasons.

## BUSINESS ORGANISATION

*Paper-Setter*—MR. NARENDRANATH SAKAR, M.A., F.S.A.A.*Examiner*—MR. PRAPHULLACHANDRA NANDI, B.Sc.*The figures in the margin indicate full marks*

## GROUP A

*Attempt ANY TWO from this group*

1. Describe the organization of a Departmental store. What are the advantages of such a store? 20
2. Give the forms of any three of the following :— 20
  - (i) Bill of Exchange.
  - (ii) Invoice.
  - (iii) Application for Shares.
  - (iv) Share Certificate.
  - (v) Dividend Warrant.
3. Give the salient features of a partnership agreement by a suitable example. 20

## GROUP B

*Attempt ANY FOUR from this group*

4. Describe the advantages of the card-indexing system. 1
5. Explain the following terms :— 16
  - (i) Contango, (ii) Backwardation, (iii) Bill of Lading, (iv) Del Credere Agent, (v) Charter Party.

6. Describe (i) Profit-sharing, (ii) Co-partnership. 15
7. Illustrate and compare the methods of calculating the Goodwill of a professional firm and a firm of manufacturers 15
8. What were the results of India going off the Gold Standard in 1931? 15
9. As sales manager of a motor car company write a letter to an enquirer about your Hire Purchase system. 15
10. What are the duties and responsibilities of any one of the following? 15
  - (i) a Bank Manager;
  - (ii) a Chief Agent of an Insurance Company;
  - (iii) a Board of Directors.

## INLAND AND FOREIGN TRADE

*Paper-Setter*—DR. JOGESCHANDRA SINHA, M.A., PH.D.

*Examiner*—DR. JITENDRAPRASAD NIYOGI, M.A., PH. D.

*The questions are of equal value*

*Answer ANY SIX questions*

1. 'There is no essential difference between domestic and international trade and consequently no place for any special theory regarding international trade.' Comment on this statement, and explain how international values are determined.
2. Discuss the importance of bank acceptances in financing foreign trade. Illustrate your answer with examples
3. Describe the part played by (a) indigenous bankers, and (b) the Imperial Bank, in financing the inland trade of India.
4. What are the conditions essential to dealing in futures in a commodity? Examine the economic justification for this class of transaction.
5. Describe briefly the present position and future prospects of the export trade of the following Indian products : (a) rice, (b) oil seeds and (c) tea.
6. What are the limits to fluctuations in the rate of exchange between :—
  - (a) two gold standard countries.
  - (b) a gold standard and a silver standard country, and
  - (c) two countries with inconvertible paper currency?
7. 'The direction of India's foreign trade has recently been changed more fundamentally than its nature.' Discuss this statement, comparing the position to-day with that in 1913-14
8. (a) A shipment of Dutch piecegoods imported into India is invoiced c.i.f. at £2,000 16s. 8d., upon which an import duty of 25% is charged by Indian customs authorities. Find the value of the goods in Indian currency, making your calculation at the rate of 1s. 5½d per rupee.  
 (b) A Calcutta merchant owes in Paris Fcs. 100,000 and a draft on Paris can be obtained at Fcs. 682 per R. 100. If the sight exchange on London is 1s. 5½d., and London quotes Paris at Fcs. 94'5. which is the cost of remittance (i) direct, and (ii) via London, neglecting charges in each case?
9. Write notes on any four of the following :
  - (a) Bill of sight.
  - (b) *Ad valorem* and specific duties.
  - (c) Drawback.
  - (d) General average loss.
  - (e) Reverse councils.
  - (f) Favourable exchange.

## ELEMENTARY COMMERCIAL LAW

*Paper-Setter*—MR. N. C. CHATTERJEE, M.A., BARRISTER-AT-LAW.

*Examiner*—MR. SATYENDRANATH CHATTERJEE, B.Sc., BARRISTER-AT-LAW.

*The questions are of equal value*

## FIRST HALF

*Answer ANY FOUR questions*

1. 'Past consideration is no consideration.' Discuss with reference to both English and Indian law.
2. How can you accept an offer by acting on it?  
Refer to the case of *Carlisle v. Carbolic Smoke Ball Co.*
3. To what extent does Mistake affect a contract?  
A agrees to sell B a specific cargo of goods per s.s. *Malwa* supposed to be on its way from London to Bombay. It turns out that before the day of the bargain s.s. *Malwa* had been cast away and the goods lost. Discuss the rights of A and B.
4. What are the rights and liabilities of parties in case of an anticipatory breach of contract?
5. How are the rights of the parties to a contract affected by supervening impossibility?
6. When and how does property pass in a contract for the sale of unascertained goods?
7. What are the rights of an unpaid vendor in respect of goods sold by him?
8. Distinguish between a Contract of Guarantee and a Contract of Indemnity.

## SECOND HALF

*Answer ANY FOUR questions*

9. Distinguish between a Joint Family Firm and a Partnership.
10. Define a promissory note and distinguish it from a Bill of Exchange.
11. How can a company be wound up? On what grounds can a shareholder petition for winding up?
12. What is the purpose of a Bill of Lading in a contract of affreightment?
13. What are acts of Insolvency? How can you adjudicate your debtor?
14. What is a submission? On what grounds can you have an award set aside?
15. When is an agreement in restraint of trade enforceable at law?
16. When can a holder of a negotiable instrument treat it either as Bill of Exchange or as a Promissory Note?

## ACCOUNTANCY

*Paper-Setter*—MR. S. N. MUKHERJEE, M.A.*Examiner*—MR. PRAPHULLACHANDRA NANDI, B.Sc. (CAL.),  
B.A. (CANTAB.).*The questions are of equal value**Answer ANY SIX questions*

1. (a) What is meant by Double Entry Book-keeping? Discuss its advantages, and give your reasons for considering whether it is, or is not, adaptable to every kind of business.

(b) Define (i) Depreciation (ii) Fluctuation, and (iii) Appreciation.

2. Shew the Journal and Cash Book entries necessary to record the following transactions :—

The Uneconomic Development Co., Ltd., is formed with a nominal capital of £200,000 divided into 50,000 Preference shares of £1 each, and 150,000 Ordinary shares of £1 each.

They buy an estate at Margate for £60,000, payable as to £10,000 in cash and £50,000 in Preference shares.

The whole of the Ordinary shares are offered for subscription to the public payable as to 5s. per share on applications, 10s. on allotment (including a premium of 2s. 6d. per share), and the balance on first call.

Applications are received for 140,000 shares which are duly allotted, and the call made.

A shareholder who applied for 1,000 shares failed to pay either the allotment or call monies and another did not pay the call on 2,000 shares.

3. The Commercial Co., Ltd., issued Rs.2,00,000 Debentures at 97 per cent., and arranged for them to be underwritten at 2½ per cent., 5 per cent. being payable on application and 20 per cent. on allotment.

Only Rs. 1,20,000 Debentures were applied for by the public, and these were duly allotted, the underwriters taking the balance.

Show these entries in the Company's books by Journal entry, and give the Ledger A/c with the Underwriters. State how the items would appear in Balance Sheet.

4. Ghose, Bose, and Mitter, sharing profits and losses equally, agree to dissolve partnership. Upon realizing their assets and meeting their liabilities following condition of affairs resulted :—

	Rs.		Rs.
Ghose's Capital A/c	1 000	Bank A/c	580
Bose's                    ,,	500	Deficiency upon Realization	630
		Mitter—loan	290
	1,500		1,500

Mitter is bankrupt and is unable to pay anything towards his loan or his share in the deficiency of the firm.

You are required to close the books of the firm.

5. The Empire Trading Co. drew a Bill dated 31st December for Rs. 1,000 at three months, which is accepted by the Dominion Co., the Empire Trading Co. agreeing to furnish the Dominion Co. with the necessary funds to meet the Bill when due.

The Bill is discounted by the Dependency Co. for Rs. 985.

The Bill is not met, but is renewed twice for periods of three months each. Dependency Co. charging Rs. 15 on each renewal. The third Bill is met and all liabilities discharged.

Show the transactions in the books of the Empire Trading Co.



6. (a) State the clauses you would expect to find in a well-drawn deed of partnership relating to accounts and financial matters generally.

(b) What is the object of charging Interest on Capital in the case of Partnership Explain the effect of omitting to charge such interest.

7. Explain fully the method you would recommend for recording to transactions involved in supplying customers with goods on sale or return. Illustrate your answer by an example in which 7 Typewriters are sent out; 4 are sold and 3 are returned. Give a specimen of the ruling of the book you recommend.

8. Under the provisions of the Indian Companies Act VII of 1913, what books and records are required to be kept by the companies? Give a form of a Share Ledger with specimen entries.

## MODERN ECONOMIC HISTORY

*Paper-Setters*—{ MR. BHUJANGABHUSHAN MOOKHERJEE, M.A., B.L.  
 „ ROHINIMOHAN CHAUDHURI, M.A.

*Examiners*—{ MR. J. KELLAS, M.A.  
 { DR. JOGISCHANDRA SINHA, M.A., PH.D.

### FIRST PAPER

*The questions are of equal value*

*Answer ANY SIX questions*

1. How far can Capitalism be said to be a product of the Industrial Revolution? Explain, in this connection, its main disadvantages.

2. Trace the history of the Labour movement in England in recent times, and show how far it has helped in ameliorating the condition of the working classes.

3. Trace the growth of industrial combinations in England in recent times. Are they anti-social? How far, and in what ways, do you think they serve or injure public interests?

4. Give a brief history of the growth of the co-operative movement in England, and indicate the salient features of its present position in that country.

5. Give a critical estimate of the contribution made to economic thought by any one of the following, viz. :—

Ricardo : John Stuart Mill ; Marshall ; Jevons.

6. What was Cobden's main contribution to economic thought? Show how it had profoundly influenced the fiscal policy of England.

7. Trace the essential background behind the doctrine of Mercantilism. How far do you think the doctrine really survives in modern times?

8. Trace how the doctrine of absolute *laissez faire* has been considerably modified in recent times. Indicate the main factors which led to it.

9. What was the underlying policy behind the Navigation Acts in England? How far, in your opinion, was the policy successful?

## ECONOMIC HISTORY

## SECOND PAPER

*The questions are of equal value*

*Answer ANY SIX questions*

1. What were the circumstances that led to the introduction of indigo cultivation in Bengal? Discuss its effects upon the tenantry of Bengal.
2. Describe the nature of India's foreign trade in the beginning of the nineteenth century. In what respects was the character of that trade modified towards the end of that century.
3. Discuss the principles underlying the Factory Act of 1911. Why was this Act modified in 1922?
4. Under what circumstances was the Permanent Settlement of land revenue introduced in Bengal? Do you advocate the imposition of a tax on the unearned increment enjoyed by the landlords of Bengal?
5. What were the causes of frequent famines in India in the latter half of the nineteenth century? What measures did the Government adopt to deal with famines?
6. Indicate the relation between the State and railway companies in India regarding financial liability and management.  
On what grounds has State management of Indian railways been advocated?
7. Indicate in brief the growth of steel industry in India. On what grounds, and with that success, has protection been granted to this industry?
8. Discuss the effects of the European war upon the industrial policy pursued by the Government of India.
9. What was the nature of monetary difficulties experienced by India in the sixties? Discuss the various proposals that were made to deal with those difficulties.

## ADVANCE ACCOUNTANCY AND AUDITING

## FIRST PAPER

*Paper-Setters*—{ Mr. RANJIT RAY, M.A.  
,, NARENDRA KUMAR MAJUMDAR, M.A.

*Examiners*—{ Mr. G. BASU, B.A., A.S.A.  
,, S. R. BATLIBOI, F.S.A.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Any FIVE questions carry full marks*

1. A, B, and C are in partnership sharing profits equally. On 31st December, 1931, A decided to retire, and their Balance Sheet on that day was as follows :—

		Rs.			Rs.
Creditors ...	...	2,500	Freehold Premises ...	...	2,000
Capital—			Stocks ...	...	8,000
A ...	...	5,000	Debtors ...	...	8,000
B ...	...	4,000	Cash ...	...	500
C ...	...	3,000			
		<hr/>			<hr/>
		14,500			14,500
		<hr/>			<hr/>

Under the articles of partnership *A* was to receive, for the years succeeding his retirement, one-half of the share of profits which he was receiving, when he retired, he leaving his capital in the business as a loan. On 1st January, 1932, *D* was admitted a partner, and paid into the firm Rs. 3,000, of which Rs. 1,000 was for goodwill, to be divided equally between *B* and *C* and placed to the credit of their capital accounts. *D* was to receive one-fourth share of the net profits after charging them with *A*'s proportion as stated above, while *B* and *C* were to divide the remainder in the same relative proportions as previously. Profit for 1932 amounted to Rs 3,150 out of which interest at 5% per annum was to be credited to *A* on his loan account, and to partners on their capital accounts at the same rate. Prepare statements showing the division of profits for 1932; the partners' Capital Accounts at 31st December, 1932. Also state the respective shares of *B*, *C*, and *D* in the profits for the year 1932.

2. Jones and Smith decided to convert their business into a limited company as from the 1st January, 1932. Their Balance Sheet on that date was as follows :—

	Rs.		Rs.
Sundry Creditors ...	15,000	Land and Buildings ...	10,000
Loan on Mortgage of Land and Buildings ...	7,500	Machinery and Plant ...	8,000
Capital :—		Models and Patterns ...	1,500
Jones ...	17,000	Stock-in-Trade ...	12,000
Smith ...	10,000	Sundry Debtors ...	17,500
		Cash in Hand ...	500
	49,500		49,500

A company called Jones, Smith & Co., Ltd. was formed for the purpose of taking over the business. Its capital was Rs. 100,000, divided into 50,000 6% cumulative preference shares of Re. 1 each and 50,000 ordinary shares of Re. 1 each. The company was a private company registered on the 31st December, 1931, the signatories of the Memorandum of Association being Jones and Smith for one share each for which they paid on the 7th January, 1932. Then company purchased the assets (exclusive of cash in hand) for Rs. 32,500 and agreed to take over the mortgage and pay the sundry creditors. The purchase price was to be discharged by the allotment to the vendors of 12,100 preference shares and 16,500 ordinary shares, and the payment of the balance in cash. The whole of the remaining capital was subscribed in cash. Prepare the Balance Sheet of the company after carrying out the above.

8. Is the Profit and Loss Account as set out below properly drawn up? If not, submit the account as you would present it.

*Profit and Loss Account, December 31st.*

	Rs.		Rs.	Rs.
To Salaries ...	820	By Stock ...	18,200	
.. Depreciation ...	1,101	Less 1st January	17,400	800
Purchases ...	42,600	.. Error in Books ...		120
Returns ...	362	.. Interest on		
Discounts ...	421	Investments	3,400	
Dividend paid ...	3,942	Less loss on		
Directors' Fees ...	1,000	sale of In-		
Trade Expenses ...	1,200	vestments	900	2,500
Dividend 5% for year	6,200	.. Balance from		
Manufacturing Wages	3,280	last Year's		
Transfer to Reserve	4,000	Account ...		4,321
Balance to Balance		.. Sales ...		59,940
Sheet ...	2,876	.. Unclaimed		
		Dividends		321
	<hr/> 68,002			<hr/> 68,002

4. *D* and *B*, having capitals of Rs. 2,000 and Rs. 1,500, admit *P* into partnership on terms that he shall contribute Rs. 1,000 as capital, and pay them Rs. 1400 for his share of the goodwill. Interest on capital to be 5% per annum (charged to Profit and Loss Account), and profit to be shared in the proportion of 4 : 3 and 2. *P* has only Rs. 1,000 which he pays in as capital; and in an attempt to meet the situation, the partners raise a 'Goodwill Account' for Rs. 1,400 which is credited Rs. 900 to *D*'s capital account, and Rs. 600 to *B*'s. You are called in at the end of the year and find they have closed the Profit and Loss Account as follows :—

				Rs.
To Interest on Capital—		By Profit	...	2,500
	Rs.	Rs.		
<i>D</i> ..	140			
<i>B</i> ...	105			
<i>P</i> ...	50			
	<hr/>	295		
To Profits divided—				
<i>D</i> ...	980			
<i>B</i> ...	735			
<i>P</i> ...	490			
	<hr/>	2,208		
		2,500		2,500

Correct the error made by the partners, and effect thereof, by Journal entries which should be fully explanatory. Show the true position of the partners' accounts.

5. From the following trial balances of the London Head Office and the New York Branch books of the Anglo-American Importers & Salemen, Ltd., at 31st December, 1932, prepare Trading and Profit Accounts of each house, and a combined Balance Sheet of the undertaking. The rate of exchange employed in the accounts is the fixed rate of 49.5/16th per dollar.

#### London Trial Balance

	£	s	d		£	s	d
Sundry Debtors ...	26,211	7	7	Share Capital ...	24,003	0	0
Cash ...	1,212	8	5	Reserve ...	5,000	0	0
Stock 1st January ...	16,009	9	3	Sundry Creditors ...	2,010	14	6
Buildings ...	2,000	0	0	Bills payable ...	1,500	0	0
Purchases ...	62,996	10	5	Sales ...	65,224	18	2
New York Branch				Goods Invoiced to			
A/c. ...	4,109	7	6	New York at cost	22,042	6	8
General Expenses ...	884	2	5	Profit on Exchange	10	2	2
Wages and Salaries	4,023	1	1	Profit and Loss			
Travellers' Expenses	1,011	24	9	A/c Balance ...	749	3	7
Carriage on Sales ...	442	1	1				
Rent, Rates, and							
Taxes ...	1,598	2	4				
	<hr/>				<hr/>		
	120,537	5	1		120,537	5	1

## B. COM. EXAMINATION

Sundry Debtors ...	31,000,00	Sundry Creditors ...	18,004,22
Stock 1st January ...	82,421,00	Bills Payable ...	10,000,00
Goods Invoiced from London		Sales ...	177,244,85
at cost	107,278,27	London Office ...	20,000,00
Purchases ...	271,21	Bank Overdraft ...	17,654,87
General Expenses ...	5,801,44		
Salaries and Wages ...	10,212,63		
Rent, Rates, and Taxes	4,811,25		
Interest ...	1,004,61		
	<u>242,803,44</u>		<u>242,803,44</u>

Stock on hand 31st December London £5,822-14-6. New York \$38,024,11.

6. (a) From the following particulars make out the Profit and Loss Account of the Southern Bank Ltd. for the year : Rebate on bills not discounted brought forward from last year Rs. 10,000; Interest received Rs. 3,00,000; Interest paid Rs. 100,000; Discount on Bills discounted Rs. 1,00,000; Commission received Rs. 20,000; Salaries Rs. 1,40,000; Printing and Stationery Rs. 10,000; Directors' Fees Rs. 10,000; Rebate on Bills discounted to be carried forward to next year Rs. 15,000; Profit on Investment sold Rs. 5,000; Depreciation written off investments Rs. 25,000; Bad debts written off Rs. 15,000; Further amount set aside to provide doubtful debts Rs. 10,000.

(b) From the following particulars make out the Balance Sheet of the East and West Bank, Ltd.; Cash in hand Rs. 2,00,000; Cash at Bank of India Rs. 10,00,000; Money at call and short notice Rs. 15,00,000; Government Paper Rs. 20,00,000; Current and Deposit Accounts Rs. 1,08,00,000; Loans and Advances Rs. 40,00,000; Share Capital Paid up Rs. 5 per share on 1,00,000 shares of 10 each Rs. 5,00,000; Share Capital Subscribed 1,00,000 shares of Rs. 10 each; Rebate on bills not due Rs. 50,000; Bills discounted Rs. 30,00,000; Acceptances on behalf of Customers Rs. 3,00,000; Profits and Loss Account Credit balance Rs. 3,50,000.

7. On 31st December, 1932, the balances of the General Ledger of the Bengal Life Assurance Co., Ltd., were as follows :—

	Rs.
Funds as on 1st January, 1932	15,57,060
Premium Account ...	1,42,000
Claims Account ...	70,050
Annuities Paid ...	1,260
Commission Account ...	6,082
Interest and Dividends Account ...	51,000
Transfer Fees Account ...	105
Surrenders Account ...	11,201
Management Expenses Account	18,670
Shareholders Dividends Account ...	2,500
Claims admitted, but not paid Account	7,200
Sundry Creditors Account	3,380
Mortgages in India ...	12,01,450
Loans on Policies ...	50,080
Government Securities	2,04,000
Stocks and Shares ...	1,38,200
House Property ...	7,500
Agents' Balances ...	12,200
Outstanding Premiums	9,200
Outstanding Interest	12,040
Cash at Bank ...	16,982

Prepare Revenue Account and Balance Sheet as at 31st December, 1932 in legal form.

8. 'The liabilities of A who adjudicated bankrupt on 1st January, 1933, are as under :—

Unsecured Creditors Rs.12,500. Creditors to the amount of Rs. 7,000 hold 6% Debentures in an oil-mill company of the face value of Rs. 10,000 belonging to the bankrupt, the market quotation for these Debentures being Rs. 8,500. Creditors for Rs. 11,000 hold bankrupts 700 shares of the Standard Bank, Ltd. The shares are of the denomination of Rs 20 on which Rs. 5 are paid. The market price of these shares is Rs. 11 each. These creditors have a second right on the Debentures of the oil-mill company mentioned above. Of the accommodation bills of Rs. 5,000 endorsed by the debtor, Rs. 900 are expected to rank against the estate for dividend. Debtors own acceptances not included in any of the above liabilities are Rs. 300. Rates and Taxes amount to Rs. 70; Wages Rs. 30; and Sheriff's Charges Rs. 20.

The bankrupt's assets were as under :—

					Rs.
Cash in hand	...	...	...	...	25
Cash at Bank	...	...	...	...	275
Cash with the Solicitors	...	...	...	...	20
Stock	...	...	...	...	800
Debtors, good	...	...	...	...	2,500
Debtors, doubtful (estimated to produce Rs. 5,200)	...	...	...	...	7,200
Debtors, bad	...	...	...	...	4,000

The bankrupt held the following investments which had not been charged or mortgaged : 50 Ordinary shares of Rs. 10 each in the Bombay Brewery Co., Ltd., which the debtor had purchased for Rs. 90 each, but which were now quoted in the market at Rs. 4 each; Rs. 3,000 7 per cent. Debentures of Rs. 10 each bought in July, 1927, at 4 per cent. premium in a Jute Company, which were now quoted at 10 per cent. premium.

The debtors capital on 1st January, 1928, was Rs. 220; his household expenses during 1928 to 1932 amounted to Rs. 7,000 in all. The profits during 1928, 1929, 1930, and 1931 were Rs. 1,700 Rs. 1,900, Rs. 1,500, and Rs. 700 respectively, and the loss during 1932, Rs. 2,900.

Prepare the debtor's Statement of Affairs and Deficiency Account.

## ADVANCED ACCOUNTANCY AND AUDITING

### SECOND PAPER

#### (AUDITING)

*Candidates are required to give their answers in their own words as far as practicable*

*The questions are of equal value*

*Answer ANY SIX questions*

1. What are the advantages of a Continuous or Periodical Audit? How would you guard against the disadvantages of such an audit?

2. You are requested to audit the first annual accounts of 'Sound Business Co.', a newly established firm consisting of three partners. Describe the information you would seek before commencing the detailed audit.

3. (a) In the event of an auditor being of opinion that the provision for depreciation was inadequate, what course should he adopt?

(b) Having suggested the necessity of a provision for Depreciation of Machinery in the accounts of each of three companies, the respective boards of directors raise objection on the following grounds respectively :—

(i) The cost of similar machinery having risen, nothing should be written off, as it is actually more valuable

(ii) Repairs done have fully maintained the machinery, which is as good as new.

(iii) The charge of depreciation to the same extent as in a good year would prevent the declaration of a dividend, with the result of dissatisfaction amongst the shareholders and a possible fall in the price of shares.

Criticize these arguments.

4. You are appointed auditor on the formation of a limited company and are requested to examine the books for the purpose of certifying the particulars required for the Statutory Report under the Indian Companies Act. What would be your programme of work to enable you to give the necessary certificate? Give the form of the certificate.

5. It is often stated that 'Dividends have been paid out of Capital'. What is meant by this statement? Is such payment prohibited by the Indian Companies Act, directly or indirectly? In what circumstances could such payment be made without contravening the provisions of the Act?

What steps would you take : (a) in vouching a Purchase Journal, (b) in vouching the debit side of a Cash Book?

7. How would you verify the following assets on a Balance Sheet : (i) Cash on deposit, (ii) Leasehold Property subject to a mortgage, (iii) Bills Receivable under discount, (iv) Goods in bonded warehouse. (v) Loan on Life Policy?

8. What steps would you take to verify the turnover of a retail trader?

9. How could a dishonest book-keeper defraud his employer in connection with Sales Ledger entries? How would you, as auditor, endeavour to discover whether such fraud had taken place?

10. Explain the principles you would adopt when allocating the under-mentioned expenditure as between capital and revenue :—

(i) Stock valued at Rs. 25,000, destroyed by fire, for which Rs. 27,500 was received from the Insurance Company.

(ii) Installation of Electric Power in a factory in place of steam.

(iii) Structural alterations to Freehold factory.

(iv) Loss on Sale of Machinery.

## BANKING AND CURRENCY

*Paper-Setters*— { MR. A. C. SENGUPTA, M.A.  
DR. HARISCHANDRA SINHA, M.Sc., Ph.D.

*Examiners*— { DR. B. RAMACHANDRA RAU, M.A., Ph.D.  
,, HARISHCHANDRA SINHA, M.Sc., Ph.D.

### FIRST PAPER

*The questions are of equal value*

*Answers ANY SIX question*

1. 'Discount rate manipulation, and sales and purchases of securities, are complementary, and not contradictory, policies of central banks.' Discuss the statement.

2. 'Good banking is produced, not by good laws but by good bankers.' Discuss this statement, and examine in this connection the need for spreading banking education in the country.

3. Discuss the characteristic features and the weak points of the Indian banking system.

4. Give a skeleton balance sheet of an Indian joint stock bank, and show how its resources are collected and employed.

5. 'Strict specialization in financing trade is a characteristic feature of the English banking system.' Discuss this statement.

6. Describe fully the working of any Clearing House that you may know of. What are its economic services? What inferences may be drawn from a study of the Clearing House figures?

7. (a) A bank decides that an account is an undesirable one and requests the customer to close it. If the customer neglects, or refuses to comply with the banker's request, what steps should the latter take to ensure the closing of the account? Give reasons for your answer.

(b) What precautions will you take when sending a cheque to your creditor by post?

8. Explain the meaning of *any four* of the following :—

- (a) right of stoppage in transitu;
- (b) confirmed bankers' credit;
- (c) letter of hypothecation;
- (d) floating charge over the assets of a company;
- (e) assignment of book debts by a company.

9. Discuss the advantages and defects of *any three* of the following as banking security :—

- (a) life insurance policy;
- (b) raw jute;
- (c) 3½% Government paper;
- (d) Calcutta house property.

Explain the method of charging the three forms of security selected by you.

## SECOND PAPER

*The questions are of equal value*

*Answer six questions only*

1. Revival of Bimetallism has been recommended as one of the remedies of the present currency difficulties in many countries.

Explain (i) what you understand by Bimetallism, (ii) what are its difficulties, and (iii) what chances it has of success (a) if adopted by one country, and (b) if adopted by many countries.

2. Clearly explain the quantity theory of money.

3. What have been the effects of linking the rupee to depreciated sterling, on the internal and foreign trade of India?

4. Examine the case for a Reserve Bank for India. In what respects does the Imperial Bank fail to perform the true functions of a Central Bank?

5. What do you understand by a 'Clearing House'? Explain how it works. What are its advantages?

6. 'The Hundi rate rises and falls with the "bank rate" proper, though somewhat in advance of it.'

Explain.



7. Explain what you understand by :—

Cross firing ; fiduciary currency ; frozen credit ; spot exchange ; forward exchange.

8. Write short notes on :—

Gold bullion standard ; Managed Currency ; Pegging the exchanges ; Tabular standard.

9. Give a brief history of paper currency in India.

## ECONOMICS OF TRANSPORT

*Paper-Setters*— { Mr. W. A. BURNS, M.A., BARRISTER-AT-LAW.  
,, MOHITKUMAR GHOSH, M.A. (CAL.),  
B.COM. (LOND.).

*Examiners*— { Mr. HARIDAS GHOSH, M.A.  
,, JATINDRAMOHAN MAJUMDAR, M.A.

### FIRST PAPER

*Answer ANY FIVE of the following questions*

*The questions are of equal value*

1. Compare the constitution and functions of the English Railway Rates Tribunal with the constitution and functions of the Indian Rates Advisory Committee.

2. What measures, if any, should, in your opinion, be taken by Indian Railways to deal with the competition arising from transport by road of passengers and goods?

3. Discuss the theory of railway rates based on postal principles, that is, one universal rate, as for an ordinary letter, irrespective of the distance.

4. 'Charges must be varied according to value, distance, and the nature of the services rendered.' Discuss this statement.

5. Illustrate the meaning of Rates Discrimination by reference to Indian Railways

6. What do you mean by Through Rates, Telescopic Rates, Block Rates, Minimum and Short distance Charges?

7. Illustrate by examples the various meanings of Undue Preference.

What use should, in your opinion, be made of Statistics in the practical working of a railway?

### SECOND PAPER

*Answer ANY FIVE of the following questions*

*The questions are of equal value*

1. 'The rise in railway expenses has made "what the railway can bear" as important a factor as "what the traffic will bear" in railway rates.' Examine how far this statement is true.

2. 'Low railway rates are impossible unless large railway wagons are used.' Examine the truth of this statement.

3. Discuss the necessity for adequate co-operation among the various means of transport to make the transport system of a big city efficient.

4. Examine the methods by which the Railways in India can be brought into touch with their customers.

5. Under what conditions would you prefer using inland water transport to railway transport, and why?

6. 'Passenger and goods transport by railway are not joint products in the normal conception of the term.' Examine the truth or otherwise of this statement.

7. Examine the reasons which led the Acworth Committee to recommend the separation of Railway finance from the General finance of the country.

8. To what extent would you justify governmental interference in railway working where railways are the properties of companies?

## AGRICULTURAL ECONOMICS

Paper-Setters & Examiners— $\left\{ \begin{array}{l} \text{RAI BAHADUR BIJAYBIHARI} \\ \text{MUKHERJEE.} \\ \text{DR. N. N. GUPTA, PH.D.} \end{array} \right.$

### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer ANY FIVE of the questions*

*All the questions carry equal marks*

1. Define a co-operative credit society. What are the advantages and disadvantages, if any, of joint responsibility?

2. Is the indebtedness of agriculturists in Bengal increasing? Discuss the remedies for this evil.

3. Draw up a scheme for starting a co-operative credit society in a Bengal village with agriculturists. What will be the main principles in the bye-laws which you will enforce?

4. What are the points of resemblance and difference in a rural co-operative credit society and a joint stock rural bank?

5. Discuss the effect of low prices of agricultural produce to-day in Bengal. Do you approve of low prices? Give reasons for your answer.

6. What are the essentials, according to Wolff, of a training for country life?

7. What principles will you follow in teaching a cultivator how to improve the productivity of his land?

8. Can the problem of unemployment among the middle class youth be solved by the adoption of agriculture as a profession? If so, draw up a scheme.

### SECOND PAPER

*The questions are of equal value*

*Answer ANY FIVE of the following*

1. What is the average incidence, per square mile, of population in Bengal? Show the strength and weakness in the number.

2. Discuss the recommendations of the Linlithgow Agricultural Commission for organising rural credit.

3. Given the resources of the ordinary Bengal peasant, discuss whether a small holding or a large holding will be to the advantage.

4. What main lines of improvement would you suggest to the Bengal peasant? Furnish details.

5. Wolff says (a) 'Education and co-operative organization are the two forces which we want to harness to our car'. (b) 'If we are to have genuine rural reconstruction it is indispensable that we should have the co-operation of women to effect it'.

Discuss one of the above, either (a) or (b).

6. What are the effects of the increasing extension of cultivation in Bengal?

7. Describe the social life of an average Bengal village, its agriculture and small industries. Suggest improvements.

8. Discuss the importance of handicrafts as supplementing agricultural work in India.

## PUBLIC FINANCE

Paper-Setters & Examiners—{ PROF. PRAMATHANATH BANERJEA,  
M.A., D.Sc., BARRISTER-AT-LAW.  
SATISCHANDRA RAY, M.A.

### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt ANY SIX questions*

1. Define *Public Expenditure*.

Examine the economic effects of the most important heads of public expenditure in India.

2. Differentiate between (a) tax, (b) fee, (c) license, (d) rate, illustrating your answer by examples from India.

When does a *rate* become a *tax*?

3. State and explain Adam Smith's canons of taxation.

4. Discuss the question whether *income* is a correct measure of a man's ability to bear the burden of taxation.

5. Indicate the principles which should govern the imposition of taxes on commodities. How far are these principles observed in the Indian tax system?

6. What are *Death Duties*? Examine the economic effects of their imposition.

7. Give the main reasons for the large growth of public expenditure in nearly all countries. From what sources has this increase been usually met?

8. Discuss the characteristics which distinguish local from national finance?

9. Discuss critically the question of the advisability of loans to finance measures which are of general social advantage but do not yield a direct financial return.

## SECOND PAPER

*Six questions only to be attempted*

1. Discuss the merits and defects of the system of direct taxation.  
Would it be correct to say that India is not a country where direct taxes ought to be levied?
2. Describe the procedure adopted in Great Britain for the passing of a finance Bill. In what respects does the procedure differ in India?
3. Describe the principal sources of provincial revenue in India.  
Examine the financial position of the Government of Bengal.
4. 'The legislatures in India exercise little control over the expenditure of Indian revenues' Examine the statement.
5. Describe the procedure adopted in a Governor's Province in India for the allocation of resources between the two halves of a Provincial Government.
6. Describe the functions of (a) the Auditor-General in India, and (b) the Public Accounts Committees
7. Discuss the merits and defects of (a) octroi duties, (b) terminal taxes.
8. Briefly trace the history of cotton excise duties in India.
9. 'The burden of an export duty falls on the domestic producer, unless the article on which the duty is levied happens to belong to the category of a monopoly in which case it is borne by the foreign consumer.' Amplify.  
Mention the articles on which export duties are levied in India at the present moment.

## PUBLIC ADMINISTRATION

*Paper-Setters*—{ MR. PRAMATHANATH BANARJEE, M.A., B.L.,  
BARRISTER-AT-LAW.  
,, W. C. WORDSWORTH, M.A.

## FIRST PAPER

*Attempt only six questions**All questions are of equal value*

1. 'Monarchy in England is a convenient hypothesis.' Discuss.
2. Does the recent Statute of Westminster II affect the integrity of the British Empire?
3. Compare and contrast the Canadian federalism with Australian federalism.
4. By what procedure could the constitutions of (a) Canada, (b) Australia, (c) Newfoundland, and (d) the Union of South Africa, be amended?
5. What is the exact position of the Dominions in the League of Nations?
6. What do you mean by British mandatory territories and British protectorates? Do you notice any distinction between the two?
7. Write notes on :—  
(a) the Gibson Bowles Act, (b) the consolidated Fund Bill, (c) the Appropriation Act, (d) Supplementary Estimates.
8. What are the functions of :—  
(a) the Board of Trade, (b) the Auditor-General, (c) the Grand Jury, (d) the Committee of Imperial Defence?
9. What is the constitutional importance of the following ?—  
(1) The Parliament Act, 1911;  
(2) The Emergency Powers Act, 1920.

## SECOND PAPER

*Attempt only six questions*

*All questions are of equal value*

1. 'In England there is one law for all.' Bring out the implications of this statement.
2. Give a brief account of the judicial system in England and India.
3. What is meant in England by 'the solidarity of the Cabinet'? Is there any approximation to this in the Government of an Indian Province?
4. What public revenues are collected in Bengal, and how? What heads of revenue go to the Government of India, and what to the Local Government?
5. What do you consider the chief obstacles to the working of democratic institutions in India? In this connexion discuss the difficulties in the way of organizing political parties.
6. What is meant by 'Federation'? What difficulties must be overcome before the whole of India can be organized in a Federation?
7. How far has local self-government been successful in Bengal in the last half-century? To what do you ascribe its chief defects?
8. To what extent have women been granted political rights and privileges in India? What extension of these has recently been recommended, and on what grounds?
9. Write notes on any four of : (a) the English County Council, (b) the municipal administration of Calcutta, (c) the duties of the (Indian) Railway Board, (d) the Statutory (Simon) Commission, (e) the Famine Code. (f) the Bengal Village Self-Government Act.

# L. T. EXAMINATION, 1933

## PRINCIPLES OF EDUCATION

(NEW SYLLABUS)

FIRST PAPER

*Paper-Setters and Examiner—MR. S. P. BISWAS, M.A.*

*The questions are of equal value*

*Answer ANY FIVE of the following questions*

1. 'The subject-matter of Educational Psychology is the behaviour of human beings undergoing the process of education.' Discuss the statement, explaining the meaning of Education and its relation to Psychology.

2. Explain the relation of perception to sensation. Show why, and how, perception should be trained in the life of a child in school.

3. Show how fatigue is caused. What are its different kinds? Explain the physiology of fatigue.

4. What is meant by 'learning as the modification of native reactions'? Enumerate some of the laws of learning.

5. Explain the nature and growth of intelligence. What are the basic problems in Intelligence Measurement?

6. 'Examinations are designed to measure changes made in pupils.' How far do you agree with this? Explain in this connection the different types of examination.

7. Classify Human Instincts. Explain how the instincts (a) of imitation and suggestibility, and (b) of selfishness, should be made use of in education.

8. Define the nature of interest. How would you help your pup to acquire an interest in uninteresting things?

9. You find a group of pupils to have acquired bad habits in connection with (a) study, (b) attention, (c) handwriting, and (d) standing, sitting, and walking. What will be your methods of curing them?

## METHODS OF TEACHING AND SCHOOL ADMINISTRATION—FIRST PAPER

(NEW SYLLABUS)

SECOND PAPER

*Paper-Setter and Examiner—MR. GURUBANDHU BHATTACHARYYA,  
B.A., B.T.*

*Answer Question 1 and FOUR others*

*The questions are of equal value*

1. Discuss the problem of the time-table in reference to 'individual differences' and learning through self-effort.

2. 'Class or mass teaching is inconsistent with the aim of education.' Comment on this statement and give your own views.
3. What do you mean by 'modern or individualistic' methods? Name and discuss one such method and remark on its adaptability to Bengal high schools.
4. What is 'Free Discipline'? Do you recommend Free Discipline for Bengal schools? If so, give an idea of the organization which appears suitable to you.
5. Discuss the problem of private tuition, specially in reference to real learning and home work.
6. 'Efficient teachers are those who do not teach.' In what sense is this statement true? Discuss.
7. Give practical suggestions on the proper use of the school library in language learning, specially the mother-tongue.

## METHODS OF TEACHING AND SCHOOL ADMINISTRATION—SECOND PAPER

### THIRD PAPER

*Paper-Setter and Examiner—MR. GURUBANDHU BHATTACHARYA, B.A., B.T.*

*Answer questions 4 and 6 and THREE others*

*The questions are of equal value*

1. Discuss the functions and good characteristics of a good school with comments where necessary.
2. Detail the good features of effective class control.  
Give practical advice to enable a new teacher to control his class effectively.
3. In what way are the corporate activities in schools helpful in ensuring good learning and good discipline?  
Draw out a practicable scheme of organization.
4. (a) Discuss the utility of Lesson Notes from the stand-point of teachers and learners.  
(b) Are you in favour of set forms of lesson notes?  
Detail your views.  
(c) Write out *only* a Lesson Form for *one* of the following class subjects —  
(i) A Reading aloud lesson (English Prose). Class IV (7th class).  
(ii) A Reading aloud lesson (Vernacular Poetry). Class VII (4th class).  
(iii) History of India. Class VI (5th class).  
(iv) Geography. Class V (6th class).  
(v) Geometry. Class VII (4th class).
5. Give (a) an idea of the types of vernacular composition which you consider suitable for Class VII (4th class), and (b) describe effective methods of teaching with the object of ensuring—  
(i) correct spelling,  
(ii) grammatical accuracy,  
(iii) clearness of expression,  
(iv) gracefulness of language.
6. Write Lesson Notes (indicating such use of the text-book as you propose to make in the class) on *one* of the following :—  
(i) Asoka or Shah Jahan. Class IV or Class VIII.  
(ii) The River System of Bengal or of India. (Choose your own class).

(iii) Personal Hygiene. Class VI.

Or,

Domestic Hygiene. Class VIII.

(iv) Square Root,—the first two lessons. (Choose your own class).

Or,

Compound Practice. Class VII.

(v) Vernacular Poetry. Class VIII. (Quote some verses for the purpose).

(vi) English Poetry. Class VIII. (Quote some verses for the purpose).

7. Describe the effective methods of teaching the following in infant classes :—

- (a) Reading at Sight.
- (b) Transition to 10 and 11 in counting and writing.
- (c) Building up the 9's table in multiplication.
- (d) Addition with carrying.
- (e) Subtraction with carrying.

In each case specially mention the apparatus and devices to be used for keeping the class engaged and making the abstract ideas clear.

## HISTORY OF EDUCATION

*Examiner*—MR. GANGACHARAN DASGUPTA, B.A., B.T.

(NEW SYLLABUS)

FOURTH PAPER

*The questions are of equal value*

*Answer ANY FOUR questions*

1. What are the special features of English Public Schools? How far can the public school ideals be introduced into the Secondary System of education in Bengal?
2. What are the special characteristics of English Rural Schools? How far can they be utilized for the improvement of our own rural education?
3. Give a short historical account of the way by which the idea of educational handwork has been introduced and developed in the system of English Elementary education. How far can educational handwork be introduced in Bengal?
4. What are the important landmarks in the history of Elementary education in the province? What suggestions can you offer to improve the present condition?
5. Give a short historical survey of the attempts made in Bengal for the education of our girls in the course of the last 50 years. Indicate the directions in which the improvement of women's education may be possible.
6. Discuss the chief provisions of the Bengal Rural Primary Education Act of 1930 with regard to (a) finance, (b) administration, and (c) training of teachers.



## ENGLISH COMPOSITION

*Examiner*—DR. SUHRITCHANDRA MITRA, M.A., D<sup>C</sup>PHIL.

(NEW SYLLABUS)

## FIFTH PAPER

*The figures in the margin indicate full marks*

1. Give in your own words the substance of *any two* of the following passages :— 30

(a) 'A divine message or eternal regulation of the Universe there verily is, in regard to every conceivable procedure and affair of man; faithfully following this, said procedure or affair will prosper... ..not following this.....destruction and wreck are certain for every affair.' These words of Carlyle's express Froebel's thought about education. Before attempting to educate we must do all we can to ascertain the divine message and must then direct our proceedings by it. The divine message must be learnt according to Froebel by studying the nature of the organism we have to assist in developing. Each human being must 'develop from within, self-active and free, in accordance with the eternal law. This is the problem and the aim of all education in instruction and training; there can be and should be no other.' For 'all has come forth from the Divine, from God, and is through God alone conditioned. To this it is that all things owe their existence ..... to the Divine working in them. The Divine element that works in each thing is the true idea of the thing.' Therefore 'the destiny and calling of all things is to develop their true idea, and in so doing to reveal God in outward and through passing forms.'

(b) From the theory of development which lay at the root of Pestalozzi's views of education, it followed that the imparting of knowledge and the training for special pursuits held only a subordinate position in his scheme. 'Education, instead of merely considering what is to be imparted to children, ought to consider first what they may be said already to possess, if not as a developed, at least as an involved faculty capable of development. Or if, instead of speaking thus in the abstract, we will but recollect that it is to the great Author of life that man owes the possession, and is responsible for the use, of his innate faculties, education should not simply decide what is to be made of a child, but rather inquire what it was intended that he should become. What is his destiny as a created and responsible being? What are his faculties as a rational and moral being? What are the means for their perfection, and the end held out as the highest object of their efforts by the Almighty Father of all, both in creation and in the page of revelation?'

(c) It is our hearts and affections that lead us right or wrong far more than our intellects. In advocating the training of the minds of the people, Lord Derby once remarked that as Chairman of Quarter Sessions he had found most of the culprits brought before him were stupid and ignorant. It certainly cannot be denied that the commonest kind of criminal is bad in every way. He has his body ruined by debauchery, his intellect almost in abeyance, and his heart and affections set on what is vile and degrading. If you could cultivate his intellect you would certainly raise him out of the lowest and by far the largest of the criminal classes. But he might become a criminal of a type less disgusting in externals, but in reality far more dangerous. The most atrocious miscreant of our time, if not of all time, was a man who contrived a machine to sink ships in mid-ocean, his only object being to gain a sum of money on a false insurance. This man was a type of the elites of criminals, had

received an intellectual training, and could not have been described by Lord Derby as ignorant or stupid.

Or

Translate any two of the following into English :—

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(a) নবকুমার অকস্মাৎ বনমধ্যে এইরূপ দেবীমূর্তি দেখিয়া স্তব্ধ হইয়া চাহিয়া রহিলেন। রমণীও স্পন্দহীন, অনিমেষলোচনে বিশাল চকুর স্থিরদৃষ্টি নবকুমারের মুখে স্থাপ্ত করিয়া রাখিলেন। উভয়মধ্যে প্রভেদ এই যে, নবকুমারের দৃষ্টি চমকিত-লোকের দৃষ্টির জ্ঞায়, রমণীর দৃষ্টিতে সে লক্ষণ কিছুমাত্র নাই, কিন্তু তাহাতে বিশেষ উদ্বেগ প্রকাশ হইতেছিল।

অনন্ত সমুদ্রের জনহীন তীরে, এইরূপে বহুকণ দুইজনে চাহিয়া রহিলেন। অনেককণ পরে তরুণীর কণ্ঠস্বর শুনা গেল। তিনি অতি স্নেহস্বরে বলিলেন, “পথিক, তুমি পথ হারাইয়াছ ?” এ ধ্বনি নবকুমারের কর্ণে প্রবেশ করিল। কি অর্থ, কি উত্তর দিতে হইবে, কিছুই মনে হইল না।

(b) অনেকদূর আসিয়াছি। বাষ্পীয় শকট না থাকিলে এত অল্প সময়ে ১৬১৭ ঘণ্টার মধ্যে এতদূরে যে আসিতে পারা যায়, তাহা কল্পনাও করিতে পারিতাম না। শরতের প্রাতঃকাল বড় রমণীয়, বড় সুন্দর। সম্মুখে অভ্রভেদী হিমালয়ের পাদবর্তিনী বনরাজিনীলমূর্তি, বাহার কথা বাল্যকাল হইতে কত গ্রন্থে পড়িয়াছি, কত পর্যটকের মুখে শুনিয়াছি, সেই চিরাকাঙ্ক্ষিত মধুর মূর্তি একবার চাহিলে সে দিক হইতে আর চক্ষু ফিরাইতে ইচ্ছা করে না; মনে হয় সারাদিন বসিয়া বসিয়া ঐ দিকেই চাহিয়া থাকি প্রাণ ভরিয়া দেখি।

(c) বেলা তৃতীয় প্রহর পর্যন্ত ভয়ঙ্কর যুদ্ধ চলিল, শেষে মারাঠাদিগেরই পরাভব হইল। সদাশিব রাও এবং বিশ্বাস রাও নিহত হইলেন; সিন্ধবংশ প্রায় নিস্কুল হইল। আফগানেরা পলায়নপর মারাঠাদিগকে অতি নিষ্ঠুরভাবে নিহত করিতে লাগিল। বাহারা বন্দী হইল, তাহারাও পরিত্রাণ পাইল না। ফলতঃ মারাঠাদিগের সেই বিপুল-বাহিনীর পঞ্চাশ সহস্র লোকও প্রাণ লইয়া ফিরিতে পারিল কি না সন্দেহ। সদাশিবের সাহায্যার্থ পেশওয়ারা স্বয়ং অগ্রসর হইতেছিলেন। তিনি গোদাবরী-তীরে এই মহাপতনের সংবাদ পাইলেন, পত্রে লেখা ছিল, “দুইটা বৃক্ষা ভস্মীভূত হইয়াছে, বাইশটা মোহর বিনষ্ট হইয়াছে আর রৌপ্য তাম্র যে কত গিয়াছে, তাহার ইয়ত্তা নাই।”

2. Write an essay on any one of the following subjects :—

80

(a) Agriculture.

(b) The Student Life.

3. Develop *any one* of the following subjects into an essay :—

20

(a) Duty.—(i) What is meant by it. (ii) Duty in childhood. (iii) Duties of youth,—at school and college, in the playground, etc. (iv) Duties of manhood.

(b) The choice of a profession.—(i) A most important enquiry. (ii) What am I best for. (iii) Which presents the best opening. (iv) Which does the greatest good to mankind. The various professions : Law, Teaching, Trade, Commerce, Medicine, Engineering, etc.

4. Make sentences to illustrate the use of the following phrases :—

6

To nip in the bud, in the nick of time, at one's elbow, tooth and nail, on one's last legs, in keeking with.

5. Correct the following :—

6

Now books of this kind has been written from all age of its greatest men : of great leaders, great statesmen, and great thinkers. This are all with your choice, and life is shortened. You heard as much before; yet have you measured and mapped up the short life and their possibilities? Do you know if you read this, that you could not have read that—that you loose to-day, you cannot gain yesterday?

6. Change *one* of the following into the Indirect form of speech :—

6

(a) At the portieres of that silent Fanberg St Germain, there is but brief question, 'Do you deserve to enter? Pass. Do you ask to be the companion of nobles? Make yourself noble and you will be. Do you long for the conversation of the wise? Learn to understand it, and you shall hear it. But on other terms?—no. If you will not rise to us, we cannot stoop to you.'

(b) 'I daresay, you did pretty well there,' he said, as his Eyes came up to the level of John's, 'but will be much hotter work here. What's your armour like?'

'Milanese,' replied John, in a fine offhand tone, and then spoiled the effect by adding 'brand new.'

'Right! and the horses? You mustn't mind my asking questions.'

'Not at all,' replied John, 'I have brought two chargers. One is a bit hard-mouthed, but neither of them ever refuses.'

# **B. T. Examination, 1933**

## **PRINCIPLES OF EDUCATION**

**(NEW SYLLABUS)**

### **FIRST PAPER**

*Paper-Setters and* { **MR J M SEN, M E (LEEDS), B Sc**  
*Examiners—* { **DR SATYANANDA RAI, M A, B D PH D.**

*The questions are of equal value*

*Attempt ANY SIX questions*

1. What, in your opinion is the aim of education? Discuss the problem of the value of different parts of the school curriculum with reference to the aim of education which you accept

2. Give various theories of play and say what facts support each and which you personally believe

3. What are the instinct and innate tendencies which chiefly contribute in building up character? Are there significant parallels between the drawings of children and those of primitive peoples? What conclusions do you draw from them?

4. Acquisition of skill is considered as a sensory training. To what extent can the class teacher influence the development of senses in pupils under instruction? What special senses in pupils are developed in the following handwork classes: (a) carpentry, (b) weaving, (c) tailoring, (d) knitting, (e) clay-modelling?

5. What is the relative importance of the following conditions of learning: absence of fatigue, arrangement of subject matter, mental attitude of students, the physical conditions of the classroom?

6. How would you find out whether your students were really attentive while you were engaged in teaching a particular class? What will you do to correct the habitual inattention on the part of some of your students?

7. Write a brief essay on the psychology of Reading.

8. Arithmetic consists of a few fundamental principles which may be applied in many ways. What psychological principles and plan should be adopted in teaching the analysis of numbers?

### **SECOND PAPER**

*The questions are of equal value*

*Attempt ANY SIX questions*

1. Describe briefly the development of McDougall's theory of instincts and emotions. What are its educational significances?

2. Distinguish between sentiment and sentimentality. How would you deal with a boy or girl of fifteen whom you thought was becoming a sentimentalist?

3. Define character, and discuss its development in pupils of school age.
4. What is the educational value of self-esteem? What can teachers do to help self-conscious children? What treatment would you recommend for pupils who suffer from (i) a sense of inferiority, and (ii) bashfulness?
5. Enumerate briefly the conditions of healthy school life and class work.
6. What are the advantages of a health examination at the time of school admission for detecting unfortunate inhibitions? Have you ever observed unhygienic conditions in the school that have become the cause of inhibition?
7. Discuss the relation between intelligence tests of the Binet type and the general estimates teachers form of the capacities of their pupils.
8. Describe some of the linguistic tests used in the Binet-Simon or Stanford intelligence scales.

## THE CONTENTS AND METHODS OF TEACHING SELECTED SUBJECTS AND SCHOOL MANAGEMENT— FIRST PAPER

### THIRD PAPER

*Paper-Setters* { KHAN BAHADUR TASADDUQ AHMAD, B.A., B.T.,  
and M.ED.  
*Examiners*—{ RAJ SAHEB MANORANJAN MITRA, B.A., B.T.

*Answer the questions on your THREE special subjects*

*The questions are of equal value*

### ENGLISH

*Answer ANY TWO questions*

1. The following passage is to be taught as a lesson in English text. Prepare full teaching notes for a class for which you think the passage is best suited :—

In this life there are no gains without pains. Life indeed would be dull if there were no difficulties. Games lose their zest if there is no real struggle, if the result is a foregone conclusion. Both winner and loser enjoy a game most if it is closely contested to the last. No victory is a real triumph unless the foe is worthy of the steel. Whether we like it or not, life is one continuous competitive examination.

2. What are the essentials of good loud reading? How do you propose to secure there?

What is the utility of silent reading? How would you secure and test progress in silent reading?

3. How would you teach 'The Sequence of Tenses'? Write notes of the first lesson on the topic.

### BENGALI

*Answer TWO questions only*

1. Name at least four Bengali prose writers from whose writings you would make a selection for the top classes of a high school. Show how you would explain the distinctive traits of the writers you select.

2. Prepare full notes of a lesson on the following stanza for Class V of a high school :—

নদী কত পান নাহি করে নিজ জল,  
 তরুণ নাহি খায় নিজ নিজ ফল ।  
 গাভী কত নাহি করে নিজ দুগ্ধ পান,  
 কাষ্ঠ দখ হ'য়ে, করে পরে অন্ন দান ।  
 স্বর্ণ করে নিজ রূপে অপরে শোভিত,  
 বংশী করে নিজ স্বরে অপরে মোহিত ।  
 শত্রু জম্মাইয়া, নাহি খায় জলধরে,  
 সাধুর ঐশ্বর্য শুধু পরহিত-তরে ।

3. Prepare a scheme of lessons on the Samasas; and write full notes of the first lesson in Class VII.

## HISTORY

*Answer two questions only*

1. Draw a line of Time, for use in Class VIII, showing the important events of a period of fifty years from Indian History and also the plan of a decisive battle with explanatory notes

2. Prepare a list of books and other necessary things with which you would equip a history room in a high school. The sum placed at your disposal is Rs. 300.

3. Draw up a scheme of lessons on 'the struggle for supremacy amongst the European nations in India', and prepare notes of one lesson of the scheme.

## GEOGRAPHY

*Answer two questions only*

1. 'In Monsoon lands the areas of densest population and heaviest rainfall frequently coincide.' Prepare full notes, with sketch maps, on the above topic, with special reference to India, for Class IX

2. Show briefly how the physical features of a country are a determining factor of its national and economic development. Prepare notes of a lesson on the topic for Class X of a high school.

3. Prepare a scheme of ten lessons for Class VI on the geography of Asia. Draw notes of the first lesson.

## MATHEMATICS

*Attempt two questions only*

1. Give an outline of the first three lessons on fractions.

2. Draw up full teaching notes on the following rider :—

'The sum of the distances from the vertices of a triangle of any point within the triangle is less than the perimeter of the triangle.'

3. How would you explain to boys of Class VIII the distinction between positive and negative quantities?

## B. T. EXAMINATION

## SCIENCE AND NATURE STUDY

*Answer two questions only*

1. Draw up a scheme of six lessons on plant-life for Class V, and prepare full notes for the first lesson.
2. You are required to introduce the teaching of the departmental science syllabus. How would you equip the science laboratory, including the practical class?
3. Draw up notes of a lesson on the 'Principle of Archimedes' for Class VIII.
4. Describe carefully an excursion in connection with Nature Study.

## HYGIENE

*Attempt two questions only*

1. What are the common physical defects of Bengali children? To what causes can these be attributed? What measures should a hostel superintendent adopt in order to cure these defects or prevent the growth thereof?
2. How would you detect myopia? What remedy would you suggest? What points should a teacher remember in order to minimize myopia in students?
3. What are the causes of mental and physical fatigue? How will you obviate both forms of fatigue?

## PRIMARY SCHOOL SUBJECTS

1. Tabulate the chief points in the inspection of a Primary school, and write a brief imaginary inspection report.
2. In a Primary school a teacher has often to teach two to three classes at a time. Describe some of the devices which the teacher must use to keep all the classes usefully engaged.
3. Prepare a time-table for a Primary school of five classes with two teachers.

## THE KINDERGARTEN SYSTEM

*Attempt three questions only*

1. Sketch the broad elements of Froebel's teaching. Write a short note on the use of 'Gifts and Occupations'.
2. Draw up a curriculum suitable for the Kindergarten. What should be the place and method of treatment of the three R's in the Kindergarten?
3. Describe a day's work for the highest class of the Kindergarten.
4. Suggest a scheme of topics based upon the seasons in Bengal and other incidents of the year. Write notes of a lesson on one of the topics.

# THE CONTENTS AND METHODS OF TEACHING SELECTED SUBJECTS AND SCHOOL MANAGEMENT—SECOND PAPER

(NEW SYLLABUS.)

## FOURTH PAPER

*Examiners*— { MR. J. M. SEN, M.E. (LEEDS), B.Sc.  
DR. SATYANANDA RAY, M.A., B.D., PH.D.

*Attempt six questions only*

*The questions are of equal value*

1. Write a short essay on Self-Government in schools as an aid to civic training.
2. What floor areas are prescribed per boy for High Schools and Hostels? Give a sketch plan of a Geography room, showing dimensions, lighting, and position of furniture and apparatus.
3. Discuss the utility of examinations. How frequently should they be held? What are the criteria of a good paper? Give examples of good and bad questions. Give advice on the marking.
4. Write a short essay on the fundamental principles of discipline and maintenance thereof in a high school.
5. Draw up a week's time-table for Class VII of a high school, giving reasons for the order of subjects each day and the amount of time given to a subject per week.
6. How would you deal with cases of (a) habitual deceit, (b) stupidity, (c) laziness, (d) a boy who stammers, (e) nervousness in children, (f) truancy?
7. Discuss the advantages and disadvantages of traditional class teaching. What substitutes have been tried in Bengal? Give reason for the success or failure thereof.
8. Draw up an application to the University for the recognition of a newly started High School, giving details of information required by the University for the purpose.
9. You are the headmaster of a High School. What statements would you keep ready against the visit of the Divisional Inspector of Schools and how would you demonstrate to him the special features of your school?

## HISTORY OF EDUCATION

(NEW SYLLABUS)

## FIFTH PAPER

*Examiner*—MR. KSHETRAPAL DASGHOSH, B.A., (CAL.), B.A.  
(OXON.), DIPLOMA IN EDUCATION (OXON.),  
BARRISTER-AT-LAW.

*The questions are of equal value. Only six questions are to be attempted. FOUR should be selected from Group I and two from Group II. You are marked for quality, not quantity.*

### GROUP I

1. 'Discipline was the very basis of life.' What were the nature and meaning of this discipline in the education of the ancient Hindu and the mediæval Mahomedan child? Has there been any essential change in this matter in modern India?



2. 'In the Athenian programme there is a striking absence of what is called useful knowledge.' Discuss. What were the ideas behind the Athenian system of education, and how far have they affected present-day ideals in education?

3. How did Vittorino da Feltre's school differ from the schools in the Middle Ages? Vittorino has been called a herald of the theories and practices of to-day. How far do you agree?

4. Sketch briefly the history and activities of the English Public Schools from the Renaissance up to the present time. Do you advocate any changes in the present-day typical English Public Schools?

5. Compare the ideas of Comenius, Locke, Spencer, and Rousseau with regard to discipline and punishment.

6. 'Restricted though Locke's aim may be, few writings are so enlightening or have had so profound an influence on subsequent thought.' Substantiate this statement.

7. 'Homer Lane's Little Commonwealth caused the hearts of many to dance.' Why? Sketch briefly the activities of the institution and the principles underlying them.

### GROUP II

1. 'In the United States of America as perhaps in England, the Universities still dominate the schools.' Discuss. How far has this control been relaxed, and in what ways? Does India compare favourably with either of the two countries in this respect?

2. Compare the English and American systems of Elementary education. Point out any lessons that India has to learn from them in reorganizing her own system.

3. Write notes on the following :—

(a) The London Country Council, (b) The Continuation School, (c) the Board of Education

4. 'The wastage in the primary and secondary stages of education in India is appalling.' Discuss. Can you suggest any remedies?

5. What legislative enactments do you find on the Statutebook calculated to further mass education in Bengal? What measure of success has been achieved, and what remains to be done?

## ENGLISH COMPOSITION

### (NEW SYLLABUS)

#### SIXTH PAPER

Examiners—{ REV. A. CAMERON, M.A., B.D.  
PROF. JNANRANJAN BANERJEA, M.A., B.L.

*The figures in the margin indicate full marks*

1 Express in your own words the substance of *one* of the following passages. Your answer should not be longer than one-third of the length of the passages chosen :— 25

(a) Blind courage is an animal virtue indispensable in a world full of dangers and evils where a certain insensibility and dash are requisite to skirt the precipice without vertigo. Such animal courage seems therefore beautiful rather than desperate or cruel, and being the lowest and most instinctive of virtues it is the one most widely and sincerely admired. In the form of steadiness under risks rationally taken, and perseverance so long as there is a chance of success, courage is a true virtue; but it ceases to be one when the love of danger, a useful passion

when danger is unavoidable, being to lead men into evils which it was unnecessary to face. Bravado, provocativeness, and a gambler's instinct, with a love of hitting hard for the sake of exercise, is a temper which ought already to be counted among the vices rather than the virtues of man. To delight in war is a merit in a soldier, a dangerous quality in a captain, and a positive crime in a statesman.

The panegyrist of war places himself on the lowest level on which a moralist or a patriot can stand and shows as great a want of refined feeling as of right reason. For the glories of war are all blood-stained, delirious, and infected with crime; the combative instinct is a savage prompting by which one man's good is found in another's evil. The existence of such a contradiction in the moral world is the original sin of nature whence flows every other wrong. He is a willing accomplice of that perversity in things who delights in another's discomfort or in his own, and craves the blind tension of plunging into danger without reason, or the idiot's pleasure in facing a pure chance. To find joy in another's trouble is, as man is constituted, not unnatural, though it is wicked; and to find joy in one's own trouble, though it be madness, is not yet impossible for man. These are the chaotic depths of that dreaming nature out of which humanity has to grow.

(b) We have our judgments and our penalties as part of the political mechanism that is forced upon us so that we may continue to live; but friendship is not friendship at all unless it teaches us that these are not part of our real life. They have to be; and we pay men, and clothe them in wigs and scarlet, to sit in judgment on other men. So we are tempted to play this game of judgment ourselves, even though no one has paid us to do it. It is only in the warmth of friendship that we see how cold a thing it is to judge and how stupid to take a pleasure in judging; for we recognize this warmth as a positive good, a richness in our natures, while the coldness that sets us judging is a poverty. Just as our criticism of a work of art begins only when we have ceased to experience it so our criticism of our friends begins only when we have ceased to experience them, when our minds can no longer remain at the height of intimacy. But this criticism is harmless if we know it for what it is, merely the natural reaction, the cold fit that comes after the warm, and if we do not suppose that our coldness is wiser than our warmth.

There are men who cannot be friends except when they are under an illusion that their friends are perfect, and when the illusion passes there is an end of their friendship. But true friendship has no illusions, for it reaches to that part of a man's nature that is beyond his imperfections, and in doing so it takes all of them for granted. It does not even assume that he is better than other men, for there is egotism in assuming that. A man is your friend, not because of his superiorities, but because there is something open from your nature to his, a way that is closed between you and most men. You and he understand each other as the phrase is; your relation with him is a rare success among a multitude of failures, and if you are proud of the success you should be ashamed of the failure.

2. Give in a connected form your impressions of one of the following poems, bringing out its meaning and remarking on its qualities :— 25

- (a) Not till life's head has cooled,  
Its headlong rush slowed to a quiet pace,  
And every purblind passion that has ruled  
Our noisier years, at last  
Spurs us in vain, for, weary of the race,  
We care no more who loses or who wins—  
Ah, not till all the best of life seems past  
The best of life begins.

To toil for only fame,  
 Hand-clappings and soon-silent gusts of praise,  
 For place, or power, or gold to gild a name  
 Above the grave whereto  
 All paths shall bring us, were to lose our days,  
 We on whose ears youth's passing bell has tolled,  
 In blowing bubbles even as children do,  
 Forgetting we grow old.  
 But the world widens when  
 Such hope of trivial gain that ruled us lies  
 Broken among our childhood's toys, for then  
 We win to self-control  
 And mail ourselves in manhood, and there rise  
 Upon us from the vast and windless height  
 Those calmer thoughts that are unto the soul  
 What stars are to the night.

- (b) I do not bid you, tired ones, cease to weep—  
 There is a time for tears;  
 Nor do I bid you less securely keep  
 Remembrance of past years :  
 I bid you only stand as those who reap  
 Amongst life's living ears.  
 I bid you still look eastward for the light,  
 And, musing on the dead,  
 Draw to yourselves the beauty and the might  
 That with their spirits fled :  
 Thus, doubly strong, toil onward through the night  
 Fed by this sacred bread.  
 The granaries of Death cannot withhold  
 From you the living seed :  
 The empty husk, the hollow tarnished gold.  
 His guerdon and his need ;  
 But unto you still live the noble-soul'd.  
 Still live, and love, and plead.  
 I do not bid you tired ones, love them less,  
 I bid you love them more ;  
 So, in the hour of utter loneliness,  
 When soul and sense implore,  
 They shall with holy benediction, bless  
 From their serener shore.

3. Write an essay on one of the following subjects :—

- (a) Scientific progress in relation to morality.
- (b) The days of our youth are the days of our glory.
- (c) The importance of little things.
- (d) Social obligations.
- (e) Literature reflects the spirit of the age.
- (f) Some industrial problems of our day.

# M.A. Examination,

1933

## ENGLISH

(Internal)

Examiners—	{	PROF. HERAMBACHANDRA MAITRA, M.A., D.LITT.
		„ JAYGOPAL BANERJEE, M.A.
		DR. SRIKUMAR BANERJEE, M.A., PH.D.
		„ MOHINIMOHAN BHATTACHARYA, M.A., B.L., PH.D.
		MR. NALINIMOHAN CHATTERJEE, M.A.
		PROF. SUNITI KUMAR CHATTERJI, M.A., D.LIT.
		„ PRAHULLACHANDRA GHOSH, M.A.
		„ RAJANIKANTA GUHA, M.A.
		„ PRIYARANJAN SEN, M.A.
		„ RAMAPRASAD MOOKERJEE, M.A., B.L.
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		„ SUHASCHANDRA RAY, M.A.
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## FIRST PAPER

*The figures in the margin indicate full marks*

### GROUP A

*Attempt ANY TWO of the following*

### FIRST HALF

1. Discuss the epic qualities of *Beowulf*. Do you find any differences, as narrative poetry, between *Beowulf* and the Middle English Romances ?

10

2. Trace briefly the influence of Religion on Anglo-Saxon Poetry, and show how far it survived after the Conquest. 10
3. Trace briefly the growth of the Allegory or the Ballad in the Middle English Period, indicating, in either case, its influence on later literature. 10
4. Write critical and historical notes on *any two* of the following :— 10  
*Deor's Lament, The Anglo-Saxon Chronicle, Historia Regum Britannie, Troilus and Criseyde.*

## GROUP B

*Attempt ANY TWO of the following*

1. State and illustrate the law underlying the 'Great Consonant Charge' from Indo-European to Teutonic, with special reference to the English language. 15
2. Discuss briefly the Latin element in English. 15
3. Trace the growth of the literary language in English. 15
4. Write philological notes on *any five* of the following :— 15  
*Children, foremost. they. must, knave, sparrow, grass, marshal, maudlin, rival, vizen.*

## SECOND HALF

*The questions are of equal value*

*Answer ANY THREE questions*

1. Estimate the powers of *two* of the following dramatists : Massinger, Jonson, Marlowe, Beaumont, and Fletcher.
2. Trace the development of English Prose from Lyly to Addison.
3. Give a brief history of *either* the Novel, or Satire, in the Eighteenth Century.
4. Write a brief account of the various handlings of the Arthurian story in Nineteenth Century poetry.
5. Write a short critical estimate of the work of *one* of the following writers :—  
 Defoe, Lamb, Swinburne, Elizabeth, Browning, Galsworthy.

## SECOND PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. Write an appreciative essay on *Antony and Cleopatra*, and examine in this connexion the charge brought against it that it has no great and noble characters. 15

*Or,*

- Write an essay on the character of Cleopatra as presented by Shakespeare. 15

2. Discuss Ben Jonson's method of characterization, indicating how far he allowed himself to be influenced by literary tradition. 15

Or,

- Discuss the merits of the Benedick-Beatrice plot in *Much Ado about Nothing*; and write a prefatory note on Shakespeare's interest in 'the duel of sex', pointing out how his earlier handling of the theme differs from his later. 15

Or,

- Much Ado about Nothing* has been praised for its 'faultless balance and absolute rectitude of design.' It has also been blamed for 'inconsistency of purpose and the clashing of two dramatic planes: the melodramatic and the purely comic.' Which of these estimates appears to you to be more nearly correct? 15

3. Fully explain the following passages, with reference to the context; and bring out the mood of the speaker in each case:— 10

(a)

My desolation does begin to make  
A better life. 'Tis paltry to be Caesar;  
Not being Fortune, he's but Fortune's knave,  
A minister of her will; and it is great  
To do that thing that ends all other deeds,  
Which shackles accidents, and bolts up change,  
Which sleeps, and never palates more the dug,  
The beggar's nurse and Caesar's.

(Discuss the reading 'dug' for 'dug' in the last line but one.)

Or,

'Tis sweating labour  
To bear such idleness so near the heart  
As Cleopatra this. But, sir, forgive me;  
Since my becoming kills me when they do not  
Eye well to you: your honour calls you  
hence;  
Therefore be deaf to my unpitied folly,  
And all the gods go with you! Upon your sword  
Sit laurel victory! and smooth success  
Be strew'd before your feet!

10

- (b) Yes Ile be sworn, I was ne'er guilty of reading the like; match it in all Pliny, or Symmachus' epistles, and Ile have my judgment burn'd in the ear for a rogue. 5

Or,

- A fasting-day no sooner comes, but my lineage goes to wrack; poor cobs! they smock for it, they are made martyrs o' the gridiron, they melt in passion; and your maids too know this, and yet would have me turn Hannibal! 5

- (c) Good Lord, for alliance! thus goes every one to the world but I, and I am sunburnt: I may sit in a corner and cry heigh-ho for a husband! 5

Or,

- Marg. Get you some of this distilled Carduus Benedictus, and lay it to your heart: it is the only thing for a quail. 5

Hero. There thou prickest her with a thistle

- Beat. Benedictus! why Benedictus? You have some moral in this Benedictus.

## SECOND HALF

1. 'In *King Lear* Shakespeare reverts once more to the Chronicle-type.' Discuss, pointing out what he loses as well as what he gains thereby. 15

Or,

- Account for the non-appearance of the Fool in Act I. 1, and his disappearance from the play after Act III. 3. 15

Or,

- Comment on Shakespeare's art of utilising the materials from the old tragi-comedy of *Leir*, specially indicating the points of departure and the reasons therefor 15

2. (a) It is said that *Venice Preserv'd* is Otway's greatest tragedy, yet it falls short of the highest tragic effect. Do you agree with this view? Bring out your points by comparing this play with any of Shakespeare's greater tragedies. 10

Or,

- 'The Drama's laws, the Drama's patrons give;  
And those who live to please, must please to live.' 10

Do you think the above has any application to Otway's tragedy? If so, to what extent?

- (b) Explain in its context :—

5.

Cry to it, nuncle, as the cockney did to the eels when she put 'em in the paste alive; she knapped 'em o' the coxcombs with a stick, and cried 'Down, wantons, down!' 'T was her brother that, in pure kindness to his horse, buttered his hay.

Or,

- Let the superfluous and lust-dieted man,  
That slaves your ordinance, that will not see  
Because he does not feel, feel your power quickly;  
So distribution should undo excess,  
And each man have enough. 5

3. Elucidate any one of the following :— 20

- (a) Ah! father, when the harmony of heaven  
Sounded the measures of a lively faith,  
The vain illusion of this fluttering world  
Seem odious to the thoughts of Margaret.  
I loved once,—Lord Lacy was my love;  
And now I hate myself for that I lov'd,  
And doted more on him than on my God,—  
For this scourge myself with sharp repents.  
But now the touch of such aspiring sins  
Tells me all love is lust but love of heaven;  
That beauty used for love is vanity:  
The world contains naught but alluring bates,  
Pride, flattery, and inconstant thoughts.  
To shun the pricks of death I leave the world,  
And vow to meditate on heavenly bliss,  
To live in Framlingham a holy nun,  
Holy and pure in conscience and in deed;  
And for to wish all maids to learn of me  
To seek heaven's joy before earth's vanity.

- (b) The heavens themselves, the planets, and this centre  
 Observe degree, priority, and place,  
 Insisture, course, proportion, season, form,  
 Office, and custom, in all line of order :  
 And therefore is the glorious planet Sol  
 In noble eminence enthron'd and spher'd  
 Amidst the other ; whose medicinal eye  
 Corrects the ill aspects of planets evil,  
 And posts like the commandant of a king,  
 Sans check, to good and bad : but when the planets  
 In evil mixture to disorder wander,  
 What plagues, and what portents, what mutiny,  
 What raging of the sea, shaking of earth,  
 Commotions in the winds, frights, changes, horrors,  
 Divert and crack, rend and deracinate  
 The unity and married calm of states  
 Quite from their fixture ! O ! when degree is shak'd  
 Which is the ladder to all high designs,  
 The enterprise is sick.

## THIRD PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Answer only ONE question from EACH group*

## GROUP A

1. Illustrate Chaucer's sense of humour from his delineation of the 18 characters of the Monk and the Friar in the Prologue to the Canterbury Tales.
2. Explain with reference to the context, and annotate *any two* of the 18 following passages :—

- (a) He was as fressh as is the monthe of May.  
 Short was his gowne, with sleeves longe and wyde ;  
 Wel koude he sitte on hors and faire ryde ;  
 He koude songs make and wel endite,  
 Juste and eek daunce, and wel purtreye and write.  
 So hote he lovede that by nyghtertale  
 He sleep namre than doth a nyghtyngeale.
- (b) Justice he was ful often in assise,  
 By patente and by pleyn commissioun,  
 For his science and for his heigh renoun.  
 Of fees and robes hadde he many oon ;  
 So greet a purchasour was nowher noon,  
 Al was fee simple to hym in effect,  
 His purchasyng nyghte nat been infect.
- (c) Benygne he was, and wonder diligent,  
 And in adwersetee ful pacient ;  
 And swich he was y-prevyd ofte sithes.  
 Ful looth were hym to curse for hise tithes,  
 But rather wolde he yeven, out of doute,  
 Unto his poure parissheis aboute,  
 Of his offryng and eek of his substaunce :  
 He koude in litel thyng have suffisaunce.



## GROUP B

3. Coleridge remarks on Dryden's method of characterization : ' Every line adds to or modifies the character which is, as it were, abuilding up to the very last verse '.

Examine this view with reference to *any one* of the important characters in *Absalom and Achitophel*.

4. ' Most satirists are usually prone to the error of attacking either mere types, or else individuals too definitely marked as individuals..... Dryden's figures are at once types and individuals.' Discuss this with reference to the characters of Zimri and Achitophel.

## GROUP C

5. What is meant by 'conceit' in English lyrics of the seventeenth century? Illustrate your answer by reference to the poems of Donne, Herbert, and Carew in your text.

6. Explain *any two* of the following and comment on their diction :—

(a) In thy immortal part

Man, as well as I, thou art.  
But something 'tis that differs thee and me,  
And we must one even in that difference be;  
I thee, both as a man and woman prize;  
For a perfect Love implies  
Love in all capacities.  
Can that for true love pass  
When a fair woman courts her glass?  
Something unlike must in Love's likeness be,  
His wonder is, one, and variety.  
For he whose soul nought but a soul can move,  
Does a new Narcissus prove,  
And his own image love.

(b) Weighing the steadfastness and state

Of some mean things which here below reside,  
Where birds like watchful clocks the noiseless date  
And inter our e of times divide,  
Where bees at night get home and hive, and flowers  
Early, as well as late,  
Rise with the sun, and set in the same bowers.  
Man hath still either toys or care,  
He hath no root, nor to one place is tied,  
But ever restless and irregular  
About this Earth doth run and ride;  
He knows he hath a home, but scarce knows where,  
He says it is so far  
That he hath quite forgot how to go there.

(c) E'en like two little bank-dividing brooks,

That wash the pebbles with their wanton streams,  
And having ranged and searched a thousand nooks,  
Meet both at length in silver-breasted Thames,  
Where in a greater current they conjoin :  
So I my Best-belovéd's am ; so He is mine.  
E'en so we met ; and after long pursuit ,  
E'en so we joined, we both became entire ;  
No need for either to renew a suit,  
For I was flax, and He was flames of fire :  
Our firm-united souls did more than twine ;  
So I my Best beloved's am ; so He is mine.

## SECOND HALF

Answer THREE questions only, of which Question No. 4 must be one

1. Write a full explanatory comment on two of the following passages, 15  
taking one from each group :—

## GROUP A

- (a) If God be in His Name; grave potency if  
The sounds unbind of hieratic chants;  
All's vast that vastness means. Nay, I affirm  
Nature is whole in her least things exprest,  
Nor know we with what scope God builds the worm.  
Our towns are copied fragments from our breast;  
And all man's Babylons strive but to impart  
The grandeur of his Babylonian heart.
- (b) For in the forest among many trees,  
Scarce one in all is found that hath made good  
The virgin pattern of its slender wood,  
That courtiesied in joy to every breeze;  
But scath'd, but knotted trunks that raise on high  
Their arms in stiff contortion, strain'd and bare;  
Whose patriarchal crowns in sorrow sigh.

## GROUP B

- (a) There burns a truer light of God in them,  
In their vexed, beating, stuffed and stopped-up brain,  
Heart, or whate'er else, than goes on to prompt  
This low-pulsed forthright craftsman's hand of mine.  
Their works drop groundward, but themselves, I know,  
Reach many a time a heaven that's shut to me,  
Enter and take their place there sure enough,  
Though they come back and cannot tell the world.  
My works are nearer heaven, but I sit here.
- (b) Just when we are safest, there's a sunset-touch,  
A fancy from a flower-bell, some one's death,—  
And that's enough for fifty hopes and fears  
As old and new at once as nature's self.  
To rap and knock and enter in our soul,  
Take hands and dance there, a fantastic ring,  
Round the ancient idol, on his base again,  
The grand Perhaps!

2. 'Modern poetry is always teaching us to find beauty where we might easily fail to notice it . . . It has widened the bounds of beauty.' Explain and illustrate this statement, with reference to the modern lyrics included in Binyon's anthology.

Or,

Attempt a critical interpretation of any two of the following 15 poems :—

R. Brooke's *The Fish*; J. C. Squire's *Winter Nightfall*; W. de la Mare's *The Listeners*; W. B. Yeats's *The Stolen Child*; J. E. Flecker's *The Gates of Damascus*.

8. Browning is often spoken of as more of a thinker than an artist. 15  
Examine the truth of this judgment with reference to his *Men and Women*.

Or,

'Cleon is a type of the Western and sceptical, Karshish of the 15  
Eastern and believing, attitude of mind.' Examine the two poems so as  
to bring out more fully the contrast between the two characters.

4. Restate as precisely as you can the view of Shakespeare presented 20  
in the couple of sonnets quoted below. How far are you prepared to  
accept it as your own?

# I

Others have pictured thee as mild and bland,  
And of a cloudless boundless human view;  
Of calm regard and of composure grand,  
To whom was nothing strange, and nothing new.  
Not thus do I conceive thee; but as one  
That bitterly exclaimed on human doom,  
And as a spirit sad beneath the sun,  
And dreading a worse thing beyond the tomb.  
Man but an angry ape appeared; who fed  
With torment laughter of the gods on high;  
Lear on the heath, Othello by the bed  
Awakened but the mockery of the sky.  
And ah! in this dark welter of the soul  
No guide art thou and urgest to no goal.

# II

O true that thou couldst warble pastoral bliss,  
Of forest and green field and fairy land,  
Since to thy boundless reach nought came amiss,  
Thou to the nearest task didst set thy hand.  
And yet thy deepest hour was vast despair,  
And the true mood of thee was dark and fell;  
Then heaven with human lightning didst thou bare,  
Thy thunder echoed in the pools of hell.  
A sunny smiler all with God at rest,  
This would they have thee for thy lighter strain.  
To me a rebel dost thou stand confest,  
With mighty mutiny of heart and brain;  
And in no vale of Arden thy renown,  
But accusation of the heavens thy crown.

Or,

Reproduce in your own words the vision of Nature presented in the 20  
stanzas quoted below. In what way does the poet's attitude towards  
Nature illustrate one aspect of the modern spirit? [It is Nature who is  
speaking in the first three stanzas] :—

# I

She said, 'I am the empty stage grown passive,  
From tremors of the mummer's tread immune;  
My emerald stairs, my courts of alabaster,  
My marble columns by the gods were hewn;  
I hear nor shout nor sigh; nor calm nor stormy,  
Feel the slow human comedy pass o'er me,  
That looks to heav'n in vain for bane or boon.

## II

Onward I roll, unseeing and unheeding,  
 By ant-heaps or the swarming hives of men;  
 For me alike their dwellings and their ashes;  
 The names of nations are beyond my ken  
 Who bare them, I am grave whom men call mother;  
 In Winter's icy shroud your lives I smother,  
 Nor heed your worship when Spring comes agen.

## III

Before you I was lovely with sweet odour,  
 Far on the wind my streaming locks flung sheer;  
 On skyeey pathways immemorial faring;  
 On the smooth axle of a God-like sphere  
 Spun onward. After you thro' void space wheeling,  
 Still shall I soar aloof from human feeling,  
 With brow and breast that cleave the all silent air.'

## IV

Thus spake she with her proud voice full of sorrow,  
 And in my heart I hated her, and knew  
 Our blood was in her tides; her fields and forests  
 Were fed with our own marrow as with dew.  
 I said unto my eyes towards her yearning,  
 'Gaze elsewhere, and weep not for her spurning;  
 Give thy love only where thou canst not rue.

## FOURTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. Bring out after Pater, the distinction between the religion of the Man of Letters and that of the Man of Science. To which of them has the religion of Sir Thomas Browne a closer affinity? Fully develop, in this connection, the sense of the remark: 'The Religio Medici is a contribution, not to faith, but to piety.' 15

Or,

Explain the meaning of the following passages, adding critical notes on the soundness and depth of the thoughts embodied in them:—

(a) Meantime, to higher or lower ends, they move too often with something of a sad countenance, with hurried and ignoble gait, becoming unconsciously, something like thorns, in their anxiety to bear grapes.

(b) And the difference of mood expressed in that question and its answer, is indicative of a change of temper in regard to the supernatural which has passed over the whole modern mind.

(c) It is part of the privilege of the genuine humourist to anticipate this pensive mood with regard to the ways and things of his own day.

2. Among the arguments advanced by Milton against the system of licensing there are some which have a permanent and universal validity, whereas others are specially deduced from contemporary religious and political conditions. Attempt to separate these two classes of arguments. How would you re-write some of the latter to suit modern conditions? 15

Or,

Discuss the prose style of Milton, bringing out clearly, among other points, (i) its nobility and grandeur, (ii) its command over irony and sarcasm, (iii) its terse and homely vigour, and (iv) its effective use of similes and metaphors, and indicating the main points of its divergence from modern prose.

3.

A

20

### ADVANTAGE OF OLD AGE

Under the general assertion of the well-being of age, we can easily count particular benefits of that condition. It has weathered the perilous capes and shoals in the sea whereon we sail, and the chief evil of life is taken away in removing the grounds of fear. The insurance of a ship expires as she enters the harbour at home. It were strange, if a man should turn his sixtieth year without a feeling of immense relief from the number of dangers he has escaped. When the old wife says, 'Take care of that tumour in your shoulder, perhaps it is cancerous'—he replies, 'I am yielding to a surer decomposition'. The humorous thief who drank a pot of beer at the gallows blew off the froth, because he had heard it was unhealthy; but it will not add a pang to the prisoner marched out to be shot to assure him that the pain in his knee threatens mortification. . . . At every stage we lose a foe. At fifty years, it is said, afflicted citizens lose their sick-headaches. But be it as it may with the sick-headache 'tis certain that graver head-aches and heart-aches are lulled once for all, as we come up with certain goals of life. The passions have answered their purpose; that slight but dread over-weight, with which, in each instance, Nature secures the execution of her aim, drops off. To keep man in the planet, she impresses the terror of death. To perfect the commissariat, she implants in each a certain rapacity to get the supply, and a little over-supply, of his wants. To secure strength, she plants cruel hunger and thirst, which so easily over-do their office, and invite disease. But these temporary stays and shifts, for the protection of the young animal, are shed as fast as they can be replaced by nobler resources. We live in youth amidst this rabble of passions, quite too tender, quite too hungry and irritable. Later, the interiors of mind and heart open, and supply grander motives. We learn the fatal compensations that wait on every act. Then—one after another—this riotous, time-destroying crew disappear.

Write out a careful summary of the above passage. How would you maintain the opposite thesis about the superiority of youth in respect of the points urged above?

Or,

B

### HEATHENISM

Schopenhauer somewhere observes that the word heathen, no longer in reputable use elsewhere, had found a last asylum in Oxford, the paradise of dead philosophies. Even Oxford, I believe, has now abandoned it; yet it is a good word. It conveys, as no other word can, the sense of vast multitudes tossing in darkness, harassed by demons. 20

of their own choice. No doubt it implies also a certain sanctimony in the superior person who uses it, as if he at least were not chattering in the general Babel. What justified Jews and Christians in feeling this superiority was the possession of a Book, a chart of life, as it were, in which the most important features of history and morals were mapped out for the guidance of teachable men. The heathen, on the contrary, were abandoned to their own devices, and even prided themselves on following only their spontaneous will, their habit, presumption, or caprice.

Most unprejudiced people would now agree that the value of those sacred histories and rules of life did not depend on their alleged miraculous origin, but rather on that solidity and perspicacity in their authors which enabled them to perceive the laws of sweet and profitable conduct in this world. It was not religion merely that was concerned, at least not that outlying, private, and almost negligible sphere to which we often apply this name; it was the whole fund of experience mankind had gathered by living; it was wisdom. So that while the theologically heathen may be those who have no Bible, the morally and essentially heathen are those who possess no authoritative wisdom, or reject the authority of what wisdom they have; the untaught or unteachable who disdain not only revelation but what revelation stood for among early peoples, namely funded experience.

Bring out clearly the author's idea of paganism as implied in the above passage.

## SECOND HALF

1. 'In the last decade of his life Burke encountered the greatest 20  
cataclysm unloosed upon Europe since the Reformation, and it is not too  
much to say that at every point he missed the essence of its meaning'

Examine this statement.

Or,

Give a clear exposition of the Political Philosophy of Burke. 20

2. Bring out the main ideas underlying *one* of the following :— 20

- (a) Natural Supernaturalism.  
(b) The Everlasting Yea.

Or,

Write a critical note on Carlyle's style in *Sartor Resartus*, in the 20  
light of the view given below :—

'There are passages in "*Sartor Resartus*" . . . which have long  
appeared to me to be the sublimest poetry of the century.' (*Birrell*).

3. Elucidate *two* of the following passages, taking *one* from each 10  
group :—

A

(a) Political reason is a computing principle; adding, subtracting,  
multiplying, and dividing, morally and not metaphysically or mathematically,  
true moral denominations.

(b) Prejudice, with its reason, has a motive to give action to that  
reason and an affection which will give it permanence.

B

(c) Too early and thoroughly we cannot be trained to know that  
Would, in this world of ours, is as mere zero to Should, and for most part  
as the smallest of fractions even to Shall.

(d) Generations are as the Days of toilsome Mankind; Death  
and Birth are the vesper and the matin bells, that summon Mankind to  
sleep, and to rise refreshed for new advancement.

## GROUP A(a)

## (SELECTED PERIOD OF ELIZABETHAN DRAMA)

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Show how the structure and equipment of the stage in Shakespeare's days influenced the form and structure of the plays produced on it.

2. 'Marlowe's heroes are embodiments of single abstract principles.' Illustrate.

3. 'The Spanish Tragedy foreshadows Hamlet.' Discuss.

4. Speaking of Shakespeare's treatment of love, a critic remarks, 'His ideal of love is a state in which passion and sense and intellect are united in happy balance, and we owe to it a series of creations of incomparable loveliness, from Rosalind and Portia to Imogen and Perdita.' Justify the remark by a brief analysis of *any two* of these characters.

5. It has been said that in Shakespeare's tragedies 'character is destiny.' Discuss.

## SECOND HALF

*Answer ANY THREE questions*

1. Compare the comic manner of Shakespeare with that of Ben Jonson, and illustrate your answer by a brief examination of the characters, Sir John Falstaff and Captain Bobadil.

2. Discuss briefly the character and appeal of the citizen-drama as represented by *The Shoemaker's Holiday*, and parodied in *The Knight of the Burning Pestle*.

3. Point out the essential characteristics of English Tragi-comedy, as illustrated in *Philaster*.

4. It is said that drama declined after Shakespeare. Discuss this statement, with special reference to the dramas of Webster or Ford.

5. 'Brooding atmosphere and sudden flashes—he (Webster) is the master of these.' Illustrate.

## GROUP A(b)

## (EARLY NINETEENTH CENTURY POETRY)

## SIXTH PAPER

*The questions are of equal value*

THREE questions to be answered in EACH half

## FIRST HALF

1.

*Either,*

Show how 'Tintern Abbey' describes the most significant changes in Wordsworth's outlook on Nature. Illustrate your answer by reference to other poems of Wordsworth.

*Or,*

Trace after Wordsworth in his 'Prelude' the different stages in the recovery of his imagination after his spiritual crisis.

2. Write a short critique on Shelley: 'lyrics of nature,' laying special stress on *any one* of the following :—

- (a) his power of making fresh myths out of nature;
- (b) his conception of the intimate relationship between man and nature;
- (c) 'the unconscious logic in arrangement' as illustrated in at least one of the lyrics.

3.

*Either,*

Write a short note on the Verse-tales of Byron with illustrative references.

*Or,*

Characterize the 'Byronic Hero' as depicted in *either* (a) *Manfred*, or (b) *Childe Harold's Pilgrimage*.

4.

*Either,*

Estimate the influence of Medievalism on Keats.

*Or,*

Trace the development of the idea of beauty in the poems of Keats.

5.

*Either,*

Characterize Shelley as a revolutionary poet.

*Or,*

'An auxiliar light  
Came from my mind, which on the setting sun  
Bestowed new splendour.' (*Wordsworth*.)

Show by illustrative references to his poems how far this tendency is discernible in his poetry.

## SECOND HALF

1.

*Either,*

Discuss 'The struggle for freedom' as a characteristic of the Romantic poets. How does this tendency reveal itself in the poetry of *any two* of the following: Byron, Shelley, Keats?

*Or,*

Elucidate the statement: 'Here (at the end of the eighteenth century) we can see the old fruit dropping off and the new forming, in a dozen different kinds and a hundred different ways. . . Nothing in literature is more interesting than to watch the effect of the half-conscious aims and desires of Cowper and Crabbe, to see how they try to put the new wine in the old bottles, to compare them with Goldsmith and Thomson on the one hand, with Wordsworth and Coleridge on the other.'

2.

*Either,*

Do you agree with the view that Crabbe was 'a Pope in worsted stockings'?

*Or,*

Point out traits in Cowper's character and refer to events of his life that tended to lead him away from the literary ideals of the classic school.

*Or,*

To what extent do you agree with the opinion that Cowper 'restored the Tale in verse to literature'?



8.

*Either,*

Coleridge's life has been called 'a midsummer night's dream.' Discuss the appropriateness of the figure, summing up what Coleridge accomplished.

*Or,*

Elucidate the following statement: 'Many men of his age had done wonderful things. . . but Coleridge was the only wonderful man I ever knew.' (Wordsworth.)

4.

*Either,*

Attempt an interpretation of *any one* of the following poems: *Alastor*, *Epipsychidion*, *The Witch of Atlas*.

*Or,*

From the following references to Byron by Shelley, deduce his opinion of Byron as a poet :—

(a) 'Tempest-cleaving swan of Albion.'

(b) 'The sun (Byron) has extinguished the glow-worm' (Shelley himself).

(c) 'I despair of rivalling Lord Byron, as well I may.'

5. Give a critical estimate of *any two* of the following poems: (1) *Christabel*, (2) *Vision of Judgment*, (3) *Eve of St. Agnes*, (4) *Lamia*.

## (GROUP A(c))

## (VICTORIAN PROSE)

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Explain the meaning of 'The Crown of Wild Olive,' and show Ruskin's defence of war from the viewpoint of æsthetic development.

2. 'The diversity of Dickens's clients is nowhere better illustrated than in the case of this, his first, and, as some think, his greatest, book.' Explain the above statement made about the *Pickwick Papers*.

3. Compare Charlotte Brontë and George Eliot as writers of English fiction.

4. 'Adam (Bede) is the complete realisation of Carlyle's peasant-saint.' Elucidate.

5. Write notes on *four* of the following :—

Stephen Guest, Traddles, Ethel Newcome, Jos Sedley, Helen Burns, and Madame Defarge.

## SECOND HALF

*Answer ANY THREE out of the following five*

1. What does Arnold mean by Hebraism and Hellenism? How far is 'Dissidence of Dissent' antagonistic to his gospel of 'Sweetness and Light'?

2. 'One knows not what idea worthy of the name of great, what purpose, instinct or tendency, that could be called great, Scott was ever inspired with. His life was worldly; his ambitions were worldly. There is nothing spiritual in him—all is economical, material, of the earth, earthy.'

What can be said in support of this view of Scott expressed by Carlyle? Do you think it wholly unfair? Give reasons for your answer.

3. 'To do as one would be done by, and to love one's neighbour as oneself, constitute the ideal perfection of utilitarian morality.'

How does Mill defend this position?

4. Discuss Newman's outlook on life, and show how far it reflects the general trend of Victorian thought.

5. 'Though Macaulay was in mental constitution one of the very least Shakespearean writers that ever lived, yet he has the Shakespearean quality of taking his reader through an immense gallery of interesting characters and striking situations.'

Elucidate and illustrate with reference to one of the historical essays written by Macaulay.

### GROUP A(d)

#### (FOREIGN CLASSICS IN TRANSLATION)

*The questions are of equal value*

#### FIRST HALF

*Attempt THREE questions only*

1. 'The English tragedy is primarily an entertainment, the Greek a religious ritual.'

Discuss this statement.

2. 'The genius of comedy is the same as that of tragedy and the writer of tragedy ought to be a writer of comedy also.'

Do you agree? Give reasons for your answer.

3. 'The "Libation-carriers" of Æschylus is not Æschylus at quite his greatest; it is, comparatively speaking, in the slack water between the vast ocean-tide of the Agamemnon and the reflux of the Eumenides.'

Consider this opinion.

4. 'Euripides taught the Athenians to think, see, understand, suspect evil, question everything.'

Discuss.

5. 'Tragedy accomplishes through pity and fear its catharsis of such emotions.' (Aristotle.)

Do you think Aristotle has in this statement seized the essence of Greek tragedy?

6. 'Sophocles is the one Greek writer who is classical in the vulgar sense.' (Murray.)

Examine the truth of this view.

7. 'I make persons as they ought to be made, Euripides makes them as they are.' (Sophocles.)

Examine the truth and implication of this claim.

8. 'There is a profound and fundamental artistic affinity between the Electra of Sophocles and Shakespeare's Macbeth.'

Discuss.

## SECOND HALF

*Answer ANY THREE questions*

1. Summarize the contents of any two of the plays of Sophocles, and indicate the main features of his dramatic genius.
2. 'In speculation Euripides is a critic and free lance; in artistic form he is intensely traditional.' Justify this statement.
3. Form an estimate of the lyrical portion of the Æschylean drama.
4. Sketch briefly the theory of the gods on which Æschylus's Prometheus is based. Show how Æschylus's Prometheus and Shelley's Prometheus differ in purpose. What do you consider to be the etymology of the name of Prometheus?
5. Of the Greek plays which you have read, which do you consider to be the greatest, and why?

## GROUP A (e)

## (HISTORY AND PRINCIPLES OF CRITICISM)

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be attempted*

1. What are the essential functions of criticism? Is it correct to say that criticism is an 'adventure among masterpieces'?
2. Compare the views of Plato, Sidney and Shelley on poetic inspiration.
3. What does Aristotle really mean by 'imitation' or by the dictum that 'poetry is a more philosophical and a higher thing than history'?
4. 'A work of art is an idealized representation of human life—of character, emotion, action—under forms manifest to sense.' Discuss.
5. Illustrate :—

*Either,*

'Aristotle's poetic theory—as interpreted by the Italians—has its first echo in English criticism in Sidney's *Apology*.'

*Or,*

'Taken as a whole, Dryden's *Essay* marks the beginning of a new development in English literary criticism.'

## SECOND HALF

*Candidates should attempt THREE questions*

1. Discuss Coleridge's arguments against Wordsworth's contention for rustic life and rustic language in poetry.

*Or,*

'Coleridge.... brewing in his head the whole of poetry and letting issue now and then one of these profound general statements.'

Illustrate, and say how far the above quotation conveys what is most essential in Coleridge's criticism.

2. Give an account of Shelley's view of the nature of poetry.

8. 'The habit of judging poets rather by their fitness as models for the young than by what was personal and incommunicable in them was strong in Arnold.'

Discuss.

4. Which English critic of the nineteenth century has stimulated you the most? Discuss the nature of the stimulus

5. Write a note on English literary criticism of the present day, indicating the influence of Croce.

## GROUPS A AND B

### (OLD SYLLABUS)

#### FIRST PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Answer Question No. 1 and two other questions*

1. Give a historical and critical estimate of any three of the following :— 18

*The Anglo-Saxon Chronicle; Historia Regum Britanniae; Troilus and Criseyde; Ralph Roister Doister; Tamburlaine; Euphues.*

2. Discuss the epic qualities of *Beowulf*, and point out the differences, as narrative poetry, between *Beowulf* and the medieval Romances. 16

3. Trace briefly the influence of Christianity on Anglo-Saxon Poetry. How far did this influence survive after the conquest? 16

4. Give some account of the sonnets of the Elizabethan period, with special reference to the *Sonnets* of Shakespeare. 16

5. Indicate and account for the influence of Seneca on Elizabethan tragedy. 16

Or,

Indicate briefly the part played by the University Wits in the development of the Elizabethan drama. 16

#### SECOND HALF

*Answer Question No. 1 and two other questions*

1. Give a concise critical estimate of the works of two of the following authors :— 18

*Donne, Bacon, Goldsmith, De Quincey, Galsworthy.*

2. What do you mean by the 'Pseudo-classicism' of the 18th century literature? How would you distinguish it from the classicism of Landor and Matthew Arnold? 16

3. Compare the 18th century Essay with the Essay of the Romantic period, with special reference to Addison and Lamb as representative authors. 16

4. Trace the growth of the English novel from Defoe to Fielding. 16

5. Discuss the influence of the poets of the Romantic Revival on Tennyson and Browning. 16

## GROUPS A AND B

## (OLD SYLLABUS)

## SECOND PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. Answer *one* of the following questions :—

15

(a) Is the source of Iago's influence over Othello more to be seen in Iago's own complex and diabolical genius or in Othello's simplicity of nature?

(b) Account for the non-appearance of the Fool in Act I, scene i of *King Lear* and his disappearance from the play after Act III, scene iii.

2. Answer *one* of the following questions :—

15

(a) Discuss the merits of the Benedick-Beatrice plot in *Much Ado about Nothing*; and write a prefatory note on Shakespeare's interest in 'the duel of sex', pointing out how his earlier handling of the theme differs from his later.

(b) *Much Ado about Nothing* has been praised for its 'faultless balance and absolute rectitude of design.' It has also been blamed for 'inconsistency of purpose and the clashing of two dramatic planes: the melodramatic and the comic.' Which of these estimates appears to you to be more nearly correct?

(c) Discuss Ben Jonson's method of characterization, indicating how far he allowed himself to be influenced by literary tradition.

3. Explain the following passages with reference to the context; and bring out the mood of the speaker in each case :— 20

(a) Villany, villany, villany !  
I think upon't : I think I smell't : O villany !  
I thought so then : I'll kill myself for grief !  
O villany, villany !

Or,

But, alas, to make me  
A fixed figure for the time of scorn  
To point his slow unmoving finger at !  
Yet could I hear that too : well, very well :  
But there, where I have garner'd up my heart,  
Where either I must live or bear no life,  
The fountain from the which my current runs,  
Or else dries up; to be discarded thence !

(b) Cry to it, nuncle, as the cockney did to the eels when she put 'em in the paste alive; she knapped 'em o' the coxcombs with a stick, and cried 'Down, wantons, down!' 'Twas her brother that, in pure kindness to his horse, buttered his hay.

Or,

Let the superfluous and lust-dieted man,  
That slaves your ordinance, that will not see  
Because he does not feel, feel your power quickly;  
So distribution should undo excess,  
And each man have enough.

(c) Yes, Ile be sworn, I was ne'er guilty of reading the like; match it in all Pliny, or Symmachus' epistles, and Ile have my judgment burn'd in the ear for a rogue.

Or,

A fasting-day no sooner comes, but my lineage goes to wrack; poor cobs! they smook for it, they are made martyrs o' the gridiron, they melt in passion: and your maids too know this, and yet would have me turn Hannibal!

(d) Good Lord, for alliance! Thus goes every one to the world but I, and I am sunburnt; I may sit in a corner and cry heigh-ho for a husband!

Or,

*Marg.* Get you some of this distilled Carduus Benedictus, and lay it to your heart: it is the only thing for a qualm.

*Hero.* There thou prickest her with a thistle.

*Beat.* Benedictus! why Benedictus? You have some moral in this Benedictus.

## SECOND HALF

1. It is said that *Venice Preserv'd* is Otway's greatest tragedy, yet it falls short of the highest tragic effect. Do you agree with this view? Bring out your points by comparing this play with any of Shakespeare's greater tragedies. 10

Or,

'The Drama's laws, the Drama's patrons give;  
And those who live to please, must please to live.' 10

Do you think the above has any application to Otway's tragedy? If so, to what extent?

2. Elucidate any two of the following:— 40

- (a) What infinite heart's-ease  
Must kings neglect, that private men enjoy!  
And what have kings, that privates have not too,  
Save ceremony save general ceremony?  
And what art thou, thou idol ceremony?  
What kind of god art thou, that suffer'st more  
Of mortal griefs than do thy worshippers?
- ... ..  
O ceremony, show me but thy worth!  
Art thou aught else but place, degree, and form,  
Creating awe and fear in other men?  
Wherein thou art less happy being feared  
Than they in fearing.  
What drink'st thou oft, instead of homage sweet,  
But poisoned flattery? Oh, be sick, great greatness,  
And bid thy ceremony give thee cure!
- (b) This is the state of man: to-day he puts forth  
The tender leaves of hopes; tomorrow blossoms,  
And bears his blushing honours thick upon him;  
The third day comes a frost, a killing frost;  
And, when he thinks, good easy man, full surely  
His greatness is a-ripening, nips his root,  
And then he falls, as I do. I have ventured,

Like little wanton boys that swim on bladders,  
 This many summers in a sea of glory;  
 But far beyond my depth : my high-blown pride  
 At length broke under me, and now has left me,  
 Weary and old with service, to the mercy  
 Of a rude stream that must for ever hide me.

- (c) The heavens themselves, the planets, and this centre  
 Observe degree, priority, and place,  
 Insisture, course, proportion, season, form,  
 Office, and custom, in all line of order :  
 And therefore is the glorious planet Sol  
 In noble eminence enthron'd and spher'd  
 Amidst the other ; whose med cinable eye  
 Corrects the ill aspects of planets evil,  
 And posts, like the commandant of a king,  
 Sans check, to good and bad ; but when the planets  
 In evil mixture to disorder wander,  
 What plagues, and what portents, what mutiny.  
 What raging of the sea, shaking of earth,  
 Commotions in the winds, frights, changes, horrors,  
 Divert and crack, rend and deracinate  
 The unity and married calm of states  
 Quite from their fixture. O ! when degree is shak'd  
 Which is the ladder to all high designs,  
 The enterprise is sick.

## GROUPS A AND B

### (OLD SYLLABUS)

### THIRD PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

1. (a) 'Certainty about a life to come, and "sight" of that life 10  
 destroy man's moral balance and his interest in life. This is the leading  
 idea in the "Epistle of Karshish".' Do you agree? Discuss the question  
 with illustrative references to the poem.

(b) Explain :—

6

So here—we'll call the treasure knowledge, say,  
 Increased beyond the fleshly faculty—  
 Heaven opened to a soul while yet on earth,  
 Earth forced on a soul's use while seeing Heaven.  
 The man is witless of the size, the sum,  
 The vaine in proportion of all things,  
 Or whether it be little or be much.

Or,

(a) 'In "Cleon" we see the futility of longing based on the lower 12  
 view of life.' Justify or criticize this statement, illustrating your answer  
 by quotations from, or references to, your text.

(b) Explain :—

4

Life's inadequate to joy,  
As the soul sees joy tempting life to take.

And so a man can use but a man's joy  
While he sees God's.

2. (a) Explain :—

8

The pause between sun-setting and and moon-rise  
Exhales a strangeness. It melts out in dream  
The experience of the wise.  
This purity of sharpened sweet spring smells  
Comes like a memory lost since I was born.  
My own heart changes into mystery !  
There is some presence nears through all these spells  
Out of the darkened bosom of the earth  
Not I the leaf, but the leaf touches me.

(Binyon.)

(b) Write a short note on 'Nature in Modern English Poetry.'

10

Or,

(a) Explain :—

6

To the forgotten dead  
Come let us drink in silence ere we part.  
To every fervent yet resolved heart  
That brought its tameless passions and its tears,  
Renunciation and laborious years.  
To lay the deep foundations of our race  
To rear its mighty ramparts overhead  
And light its pinnacles with golden grace  
To the unhonoured dead.

(b) 'That the Great War should not have left greater mark on English poetry may seem surprising but that life-and-death struggle . . . was in many sensitive hearts a horror far too deep for words.' Criticize the above statement, pointing out the reaction of Modern English poetry to the Great War.

12

3. Estimate Spenser's indebtedness to the Middle Ages as illustrated in his 'Faerie Queene', Book II.

16

Or,

Show by references to your text how 'Spenser was by no means indifferent to the life around him and those who represent him as the poet of a remote fairyland gravely misunderstand him.'

16

## SECOND HALF

1. 'There is heard in *Paradise Regained* the voice of a high Stoical philosophy, strong in self-sufficiency, and rich in illustrations drawn from the experience of the ages.' Discuss with reference to your text.

10

Or,

'The true end of satire is the amendment of vices by correction.' (Dryden.) How far has Dryden been successful in observing this principle in his *Absalom and Achitophel*?

10



2. Elucidate *any two* of the following passages : -

## A

O foolishness of men ! that lend their ears  
 To those budge doctors of the Stoic fur,  
 and fetch their precepts from the Cynic tub,  
 Praising the lean and sallow Abstinence !  
 Wherefore did Nature pour her bounties forth  
 With such a full and unwithdrawing hand,  
 Covering the earth with odours, fruits, and flocks,  
 Thronging the seas with spawn innumerable,  
 But all to please and sate the curious taste ?  
 And set to work millions of spinning worms,  
 That in their green shops weave the smooth-haired silk,  
 To deck her sons ; and, that no corner might  
 Be vacant of her plenty, in her own loins  
 She hatched the all-worshipped ore and precious gems,  
 To store her children with. If all the world  
 Should, in a pet of temperance, feed on pulse,  
 Drink the clear stream, and nothing wear but frieze,  
 The All-giver would be unthanked, would be unpraised.  
 Not half his riches known, and yet despised ;  
 And we should serve him as a grudging master,  
 As a penurious niggard of his wealth,  
 And live like Nature's bastards, not her sons,  
 Who would be quite surcharged with her own weight,  
 And strangled with her waste fertility.

20

## B

Ah, we are neither heaven nor earth, but men ;  
 Something that uses and despises both,  
 That takes its earth's contentment in the pen,  
 Then sees the world's injustice and is wroth,  
 And flinging off youth's happy promise, flies  
 Up to some breach, despising earthly things,  
 And, in contempt of hell and heaven, dies  
 Rather than bear some yoke of priest- or kings.  
 Our joys are not of heaven nor earth, but man's,  
 A woman's beauty, or a child's delight,  
 The trembling blood when the discoverer scans  
 The sought-for world, the guessed-at satellite ;  
 The ringing scene, the stone at point to blush  
 For unborn men to look at and say ' Hush '.

20

## C

He dwells in all,  
 From life's minute beginnings, up at last  
 To man—the consummation of this scheme  
 Of being, the completion of this sphere  
 Of life : whose attributes had here and there  
 Been scattered o'er the visible world before,  
 Asking to be combined, dim fragments meant  
 To be united in some wondrous whole,  
 Imperfect qualities throughout creation,  
 Suggesting some one creature yet to make,  
 Some point where all those scattered rays should meet  
 Convergent in the faculties of man.

20

Power—neither put forth blindly, nor controlled  
 Calmly by perfect knowledge; to be used  
 At risk, inspired or checked by hope and fear :  
 Knowledge—not intuition, but the slow  
 Uncertain fruit of an enhancing toil,  
 Strengthened by love : love—not serenely pure,  
 But strong from weakness, like a chance-sown plant  
 Which, cast on stubborn soil, puts forth changed buds  
 And softer stains, unknown in happier climes ;  
 Love which endures and doubts and is oppressed  
 And cherished, suffering much and much sustained,  
 And blind, oft-failing, yet believing love,  
 A half-enlightened, often-chequered trust :—

All shape out dimly the superior race,  
 The heir of hopes too fair to turn out false,  
 And man appears at last.

## GROUPS A AND B

(OLD SYLLABUS)

## FOURTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. 'In the last decade of his life Burke encountered the greatest 20  
 cataclysm unloosed upon Europe since the Reformation, and it is not too  
 much to say that at every point he missed the essence of its meaning.'

Examine this statement.

Or,

- Give a clear exposition of the Political Philosophy of Burke. 20

Or,

- 'Johnson, it may be said, like most of his contemporaries, consi- 20  
 dered poetry almost exclusively from the didactic and logical point of view.  
 He always inquires what is the moral of a work of art.....For the purely  
 musical effect of poetry he has little or no feeling.'

Examine this statement.

Or,

- Write a critical note on Johnson's appraisal of *Paradise Lost*. 20

2. Bring out the main ideas underlying one of the following :— 20

- (a) Natural Supernaturalism.  
 (b) The Everlasting Yea.

Or,

- Write a critical note on Carlyle's style in *Sartor Resartus*, in the 20  
 light of the view given below :—

'There are passages in "*Sartor Resartus*".....which have long  
 appeared to me to be the sublimest poetry of the century.' (*Birrell*.)

8. Elucidate *one* of the following extracts, and add a comment on the 10 style and the thought :—

(a) Insist on yourself; never imitate. Your own gift you can present every moment with the cumulative force of a whole life's cultivation; but of the adopted talent of another, you have only an extemporaneous, half possession. That which each can do best, none but his Maker can teach him. No man yet knows what it is, nor can, till that person has exhibited it. Where is the master who could have taught Shakspeare? .....Every great man is a unique. The Scipionism of Scipio is precisely that part he could not borrow. Shakspeare will never be made by the study of Shakspeare. Do that which is assigned you, and you cannot hope too much or dare too much.

(b) Men fear thought as they fear nothing else on earth—more than ruin, more even than death. Thought is subversive and revolutionary, destructive and terrible; thought is merciless to privilege, established institutions, and comfortable habits; thought is anarchic and lawless, indifferent to authority, careless of the well-tried wisdom of the ages. Thought looks into the pit of hell and is not afraid. It sees man, a feeble speck, surrounded by unfathomable depths of silence; yet it bears itself proudly, as unmoved as it were lord of the universe. Thought is great and swift and free, the light of the world, and the chief glory of man.

## SECOND HALF

1. (a) What, according to Pater, is the special function of mind in 10 style, and how does he distinguish it from 'the quality of soul in literary art'?

Or,

(b) Write short notes on *any two* of the following :— 10

(i) The 'rich delicate dreaminess of Coleridge'.

(ii) 'That modern subjectivity, which may be called the Montaignesque element in literature.'

(iii) 'The concentrated presentment of passion' in Wordsworth.

2. (a) It has been remarked that in Areopagitica Milton's 'thoughts 10 rush upon him in a throng that he can at times scarcely order and control. His utterance is almost choked.' Discuss and illustrate.

Or,

(b) Amplify the arguments summed up in *any two* of the following 10 passages from Areopagitica :—

(i) That which purifies us is trial, and trial is by what is contrary.

(ii) Truth is compared in Scripture to a streaming fountain; if her waters flow not in a perpetual progression, they sicken into a muddy pool of conformity and tradition.

(iii) The punishing of wits enhances their authority.

3. Explain *any two* of the following passages, clearly bringing out 30 their main ideas :—

(a) Without the aid of prejudice and custom, I should not be able to find my way across the room; nor know how to conduct myself in any

circumstances, nor what to feel in any relation of life. Reason may play the critic, and correct certain errors afterwards; but if we were to wait for its formal and absolute decisions in the shifting and multifarious combinations of human affairs, the world would stand still. Even science after a certain time becomes presumption; and learning reposes in ignorance. It has been observed, that women have more tact and insight into character than men, that they find out a pedant, a pretender, a blockhead, sooner. The explanation is that they trust more to the fiat impressions and natural indications of things, without troubling themselves with a learned theory of them; whereas men, affecting greater gravity, and thinking themselves bound to justify their opinions, are afraid to form any judgment at all, without the formality of proofs and definitions, and blunt the edge of their understandings, lest they should commit some mistake.

(b) It is not necessary to teach men to thirst after power. But it is very expedient that by moral instruction, they should be taught, and by their civil constitutions they should be compelled, to put many restrictions upon the immoderate exercise of it, and the inordinate desire. The best method of obtaining these two great points forms the important, but at the same time the difficult problem to the true statesman. He thinks of the place in which political power is to be lodged, with no other attention, than as it may render the more or the less practicable, its salutary restraint and its prudent direction. For this reason no legislator, at any period of the world, has willingly placed the seat of active power in the hands of the multitude: because there it admits of no control, no regulation, no steady direction whatsoever. The people are the natural control on authority; but to exercise and to control together is contradictory and impossible. As the exorbitant exercise of power cannot, under popular sway, be effectually restrained, the other great object of political arrangement, the means of abating an excessive desire of it, is in such a state still worse provided for. The democratic commonwealth is the fruitful nurse of ambition.

(c) The sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their number, is self-protection. That the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant. He cannot rightfully be compelled to do or forbear because it will be better for him to do so, because it will make him happier, because, in the opinions of others, to do so would be wise, or even right. These are good reasons for remonstrating with him, or reasoning with him, or persuading him, or entreating him, but not for compelling him, or visiting him with any evil in case he do otherwise. To justify that, the conduct from which it is desired to deter him must be calculated to produce evil to some one else. The only part of the conduct of any one, for which he is amenable to society, is that which concerns others. In the part which merely concerns himself, his independence is, of right, absolute. Over himself, over his own body and mind, the individual is sovereign.

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GROUP A  
(OLD SYLLABUS)  
FIFTH PAPER  
CHAUCER TEXTS  
FIRST HALF

*The figures in the margin indicate full marks*

1. Explain *four* of the following passages, referring to the context. 20  
(Select *two* from each group) :—

GROUP I

- (a) He yaf nat of that text a pulled hen,  
That seith, that hunters been nat holy men;  
Ne that a monk, whan he is cloisterless,  
Is lykned til a fish that is waterless;  
That is to seyn, a monk out of his cloistre.
- (b) It is nat honeste, it may nat avaunce  
For to delen with no swich poraille.  
But al with riche and sellers of vitaille.  
And over-al, ther as profit sholde aryse,  
Curteys he was, and lowly of service.
- (c) For he was Epicurus owne sone,  
That heeld opinioun, that pleyn delyt  
Was verrailly felicitee parfyt  
An housholdere, and that a greet, was he;  
Seint Julian, he was in his contree.
- (d) But wel I woot he lyed right in dede;  
Of cursing oghte ech gilty man him drede—  
Forcurs wol slee, right as assoilling saveth—  
And also war him of a *significavit*.
- (e) Crist spak himself ful brode in holy writ,  
And wel ye woot, no vileinye is it.  
Eek Plato seith, who-so that can him rede,  
The wordes mote be cosin to the dede.

GROUP II

- (f) To chaungen gan the colour in hir face,  
Right as the hunters, in the regne of Trace,  
That tondeth at the gappe with a spere,  
Whan hunted is the leoun or the bere.  
And hereth hym come russhyng in the greves . . .
- (g) Yet saugh I Woodnesse, langhyng in his rage,  
Armed compleint, out-bees, and fierce outrage,  
The careyne, in the busk, with throte y-corve,  
A thousand slayn and nat of qualm y-storve . . .
- (h) He stingeth him upon his speres orde;  
He rent the sail with hokes lyke a sythe;  
He bringeth the cuppe, and biddeth hem be flythe;  
He poureth pesen up on the hacches slider;  
With potles ful of lym they goon to-gider . . .

- (i) My bidding bath yow slain, as in this cas.  
 Allas ! to bidde a woman goon by nighte  
 In place ther as peril fallen mighte,  
 And I so slow ! allas, I ne hadde be  
 Here in this place a furlong-wey or ye !
- (j) 'Sawe ye', quod she, 'as ye han walked wyde,  
 Any of my sustren walke yow heasyde,  
 With any wilde boor or other beste  
 That they han hunted to, in this foreste,  
 Y-tukked up, with arwes in her cas?'
2. Write etymological notes on ten of the following words and 10  
 expressions :—Wantowne, solempne, tappestere, levere, pleyn,  
 science, y-cleped, koude, whylom, halwes, thise seven yeer,  
 if you liketh alle, highte, herberwe, oure aller cost, mester,  
 lovyere, anon, his lady grace, morsel, maistrie, knave, a faire  
 plates, doute, whirreve.
3. Answer two of the following questions :— 20
- (a) 'No one painted the Middle Ages better than Chaucer.'  
 Illustrate.
- (b) Chaucer has been called 'the Father of English poetry.'  
 Discuss.
- (c) Write a critical appreciation of *The Legend of Good Women*.
- (d) Write a note on Chaucer's style, with special reference to the  
 following remark : 'The splendour and artifice of style, whether  
 the latter be personal or conventional, were unknown to Chaucer.'  
 (*Legouis*.)

## SECOND HALF

*The figures in the margin indicate full marks*

1. Render into Modern English prose two of the following passages :— 40
- (a) The storie of Alisaundre is so comune,  
 That every wight that hath discrecioun  
 Hath herd somewhat or al of his fortune.  
 This wyde world, as in conclusioun,  
 He wan by strengthe, or for his hye renoun  
 They weren glad for pees un-to him sende.  
 The pryde of man and beste he leyde adoun,  
 Wher-so he cam, un-to the worldes ende.  
 Comparisoun might never yit be made  
 Bitwixe him and another conquerour;  
 For al this world for drede of him hath quaked,  
 He was of knighthode and of fredom flour;  
 Fortune him made the heir of hir honour;  
 Save wyn and women no-thing mighte aswage  
 His hye entente in armes and labour;  
 So was he ful of leonyn corage.
- (b) This Pelleus bethoghte upon this wyle;  
 That he is newew Jasoun wolde enhorte  
 To sailen to that lond, him to disporte,  
 And seide, 'Neew, if hit mighte be  
 That swich a worship mighte fallen thee,  
 That thou this famous tresor mightest winne,

And bringen hit my regioun with-inne,  
 Hit were to me gret plessaunce and honour;  
 Than were I holde to quyte thy labour.  
 And al the cost I wol my-selven make;  
 And chees what folk that thou wilt with thee take;  
 Lat se now, darstow taken this viage?  
 Jasoun was yong, and lusty of corage,  
 And under-took to doon this ilke emprise.

- (c) So whan this Calkas knew by calculinge,  
 And eek by answeere of this Appollo,  
 That Grekes sholden swich a peple bringe,  
 Thorough which that Troye moste been for-do  
 He caste anon out of the toun to go;  
 For wel wiste he, by sort, that Troye sholde  
 Destroyed been, ye, wolde who-so nolde.  
 For which, for to departen softly  
 Took purpose ful this forknowinge wyse,  
 And to the Grekes ost ful prively  
 He stal anon; and they, in curteis wyse  
 Him deden bothe worship and servyse,  
 In trust that he hath conning hem to rede  
 In every peril which that is to drede.

2. Write a short note on *any one* of the following :—

10

- (a) The history of the supremacy of the Genitive case ending—s.  
 (b) The various stages of the introduction of Latin words into the English language.  
 (c) Middle English Syntax.  
 (d) Back-formations and hybrids.

### GROUP B(a)

#### (OLD ENGLISH TEXTS)

*The figures in the margin indicate full marks*

#### FIRST HALF

1. Attempt *any two* of the following questions :—

30

(a) Render into Modern English :—

And þæt was geworden, þæs þe hē smele, þurh gelæredra regolbryce  
 and þurh læwedra lahbryce, þurh rīcra rēaðlac, and þurh gitsunge  
 wōhgestrēona. þurh lēoda unlaga, and þurh wōhdoma, þurh bisceopa  
 æsolcennesse and unsnotornesse, and þurh 'yrre yrhþe Godes bydela,  
 þe sōþes geswugedan ealles tō gelōme, and clūmedan mid cōaflum þær hy  
 scoldan clypian. þurh fūlne ēac folces gælsan, and þurh oferfylla and  
 manigfealde synna heora eard hy forworhton, and sylfe hi forwurdan.

Give a brief account of the literature, arising out of the Danish incursions.

(b) Render into Modern English :—

Ac he cydde syððan his facenfullan syrwunge, hū hē ymbe wolde,  
 gif hē hine gemette, þā þā hē ealle his efenealdan ædylegode for his  
 ānes ehtnyse. þearfēas hē syrwde ymbe Crist: ne cōm hē for þy  
 þæt hē wolde his eorþlice rice, oþþe æniges oþres cýnings mid riccetera  
 him tō getēon; ac tō þi hē cōm þæt he wolde his heofenlice rice gelæafulum

mannum forgyfan Ne cōm hē tō þȳ þæt hē wære on mærlicom cynesetle āhafen, ac þæt hē wære mid hospe on rōde-hengene genægloð.

Derive the *italicized* words. Give the different parts of the verbal roots of cōm, getēon forgyefan, and āhafen.

(c) Render into Modern English :—

Þa wæs ðær eac swiðe egeslic geatweard, ðæs nama sceolde bion Caron, sē hǣfde eac prīo hǣfdu, and wæs swiðe oreald. Þa ongann se hearpere hine biddan þæt hē hine gemundbyrde ðā hwile þe he ðær wære, and hine geandne eft ðonan brohte. Þa gehēt hē him ðæt, for ðæm hē wæs oflyst ðæs sælcoupan sōnes. Þa ðode hē furður oð hē gemette ðā graman gydena ðe folcisce menn hātað Parcas, ðā hī secgað ðæt on nānnum menn nyton nāne āre, ac ælcum menn wrecen be his gewyrhtum; þā hī secgað ðæt walden ælces mannes wyrde.

Parse the *italicized* words. Give the opposite genders of *hearpere*, and *gydena*. Write grammatical notes on *brohte*, *gehēt*, and *nyton*.

2. (a) Decline *þōc* and *heofon*. Compare *yfel*. Conjugate fully 10  
*ceosan* or *witan*.

Or,

(b) Write philological notes on *any five* of the following :— 10

*Wyrð, eom, forma, lambu, sǣwon, eode, slēah, fēng.*

3. Render into Modern English :— 10

Hit gebyrðe gio on Troiana gewinne þæt þær wæs an cyning þæs nama (wæs) Aulixes (*Ulysses*), se hǣfde twa þioda under þam kasere. Þa þioda wæron batene Iþacige and Retie (*Retia*) and þæs kaseres nama wæs Agamemnon. Þa se Aulixes mid þam kasere to þam gefohte fōr, þa hǣfde he sume hundred scipa. Þa wæron hi sume ten gear on þam gewinne. Þa se cyning eft ham cerde from þam kasere and hi þæt land hǣfdon gewunnen, þa næfde (he) mā scipa þonne æn. Þa gestōð (*opposed*) him heah weder and storm sæ. Wearþ þa fordrifen on an iglond ut on ðære Wendel sæ.

## SECOND HALF

Answer Question No. 1 and ANY TWO of the other questions

1. Render into Modern English prose the following passage :— 10

Nū ic suna mīnum	svllan wolde
gūðgewædan.	þær mē gifeðe swā
ænig yrsweard (= heiri	æfter wurde
live gelenge	Ic ðās lēode hēold
fiftig wintra;	næs se folcgyning,
ynhesittendra	ænig ðāra,
þā mec gūðwinum	gretan dorste,
egesum ðon	Ic on earde bāf
mælgescæfta,	hēold mīn tela.
ne sōhte searoniðas (= feuds),	ne me swor fela
aða on unriht	

2. (a) Render into Modern English prose the following passage, 13  
adding notes upon the *italicized* words :—

Ne *sorga*, snotor guma! sǣle bið æghwæm  
þæt hē his frēond wrece þonne hē *fela* murne;  
ūre æghwylc soeal gode gebidan  
worelde lifes; wyrce sē þe mōte  
dōmes ær dōaþe! þæt bið dryhtguman  
unlifgendum æfter sǣlest.



Aris, rices weard; uton raþe færan,  
 Grēndles māgan gang scēawian!  
 Ic hit þē gehāte : nō hē on holm losað,  
 ne on foldan fæþm, ne on fyrgeholt,  
 ne on gyfenes grund, gá þær hē willee;  
 ȝys dōgor þū gefyld hafa  
 wēana gehwylces, swa ic þē wēne tō.

(b) 'To have preserved for us a faithful picture of many phases of the ancient Germanic life in its material as well as its moral aspect, is indeed one of the chief glories of *Beowulf*.' Discuss. 7

Or,

Reproduce in simple prose Hrothgar's description of the abode of Grendel and his mother. What element in this description appeals to you most? 7

3. (a) Render into Modern English prose the following passage, pointing out its beauties :— 13

For þon nū mīn hyge hweorfeð ofer hreþerlocan,  
 mīn mōdsefa mid mōreðōde  
 ofer hwæles æþel, hweorfeð wīde  
 eorþan scēatas, cymeð eft tō mē  
 gifre and grædig, gielleð āflaga,  
 hwæteð on (h)wælweg hreþer unwearnum  
 ofer holma gelagu.

(b) Compare *The Seafarer* with either Tennyson's *Sailor Boy* or Massey's *Sea Fever*, or any other Modern English poem which strikes the same note. 7

4. (a) Render into Modern English prose the following passage, adding notes on the words in *italics* :— 13

Ic þē þancige, ȝeodra Waldend,  
 enlra þæra wyрна þe ic on worulde gebād :  
 nū ic āh milde Metod, mæste þearfe,  
 þæt þū mīnum gāste gādes geunne,  
 þæt mīn sáwul tō þe siððian mōte,  
 on þīn geweald, þeoden gūgla.  
 mid friþe ferian; ic eom frymði tō þe,  
 þæt hi heallceaðan hýran ne mōton.

(b) Discuss—'The patriotic feeling which probably gave rise to *Judith* was certainly responsible for the *Battle of Maldon*, sometimes called *Byrhtnoth's Death*.' 7

Or,

Discuss fully the question of the authorship of *Genesis B*.

## GROUP B(b)

### (MIDDLE ENGLISH TEXTS)

*The figures in the margin indicate full marks*

#### FIRST HALF

1. Render into Modern English *any four* of the following passages, adding grammatical and etymological notes, where necessary :— 25

(a) Ancre þet naneð nout neih hond hire uode, benð bisia two wummen: one þet bileane euer et hom, on oðer þet wende nt hwon hit is need: and þeo beo ful nurne [oðer a lute þuhten], oðer of feir elde: and

bi þe weie ase heo geſ go ſinginde hire beoden ; ne ne holde heo nont none  
tale mid mon ne mid wummon : ne ne ſitte ne ne ſtonde , bute þæt leſta  
þæt heo mei, er þen heo kume hom.

- (b) No, þu haueſ wel ſcharpe clawe,  
Ne kepiſ noſt þæt þu me clawe,  
þu haueſ clivers ſwiþe ſtronge,  
þu twengat þar-mid ſo doþ a tonge.  
þu þoſteſt, ſo doþ þin i-like,  
Mid faire worde me bi-ſwike ;  
Ich nolde don þæt þu me raddeſt  
Ich wiſte wel þæt þu me miſraddeſt.
- (c) Al he ſalde, that ouct doucte,  
That he eue ſelle moncte,  
And al he to the peni drou :  
Hiſe ſhip he greythede wel inow,  
He dede it tere, and ful wel pike,  
That it ne douteſe ſond ne krike ;  
Ther-inne dide a ful god maſt,  
Strong kables, and ful faſt.
- (d) King William waſ to milde men ' debonere ynou,  
Ac to men þæt him wiþ-ſede ' to alle ſturnhede he  
drou.  
In church he waſ deuout inou ' vor him ne ſſolde  
no day abide,  
þæt he ne hurde maſſe & matines ' & eueſong & ech  
tide.  
So varþ monye of þiſ heyemen ' in chirche me may  
yſe  
Knely to God, aſ hiſ wolde ' al quic to him fle,  
Ac he hii ariſe, & abbeþ iturnd ' fram þe weued hor  
wombe,  
Wolueſ dede hii nimeþ vorþ ' þæt er dude aſ  
lombe.
- (e) 3it ihoued þere an hondreth ' in houueſ of ſelke,  
Seriaunt3 it ſemed ' þæt ſerueden atte barre,  
Plededen for penyeſ ' and poundeſ þe lawe,  
And nou3t for loue of owre lorde ' vnleſe here  
lippes onis.  
þow my3teſt better mete þe myſte ' on maluerne  
hulleſ,  
þan geþe a momme of here monthe, but money  
were ſhewed.
- (f) I haue a neighbore ney3e me ' I haue ennuyed  
hym ofte,  
And lowen on hym to lordes ' to don hym leſe hiſ  
ſiluer,  
And made hiſ frendeſ ben hiſ ſoon ' thorw my  
faulſe tonge ;  
Hiſ grace and hiſ good happes ' greueth me ful  
ſore.  
And whan I mete him in market ' þæt I moſte hate,  
I hailſe hym hendeliſche ' aſ I hiſ frende were.

2. Deſcribe the main changeſ in the Engliſh Language during the 12  
period 1100-1250.

Or,

Write a critical appreciation of 'The Owl and the Nightingale'. 12

Or,

Give a deſcription of Avarice, after Langland. 12

8. Render into Modern English *one* of the following passages :—

10

- (a) Li3tliche Ly3ere leap a-wey þennes,  
 Lurkede Þorw lones ' to-logged of Monye ;  
 He nas nou3where wel-come ' for his mony tales.  
 Bote our al I-hunted ' and hote to trusse.  
 Pardoners hedden hite ' and putten him to house,  
 Wosschen him and wrongen him ' & wounden him  
 in cloutes,  
 And sen3en him on sonendayes ' with seales to  
 churches,  
 And 3af pardun for þons ' poundmel- a-bonte.  
 Þis leornden þis leches ' and leittre him senden  
 For to wone with hem ' watres to loke  
 Spicers speeken with him to a-pien heore ware  
 For he kennede him 10 heore craft & Kneu3 mony  
 gummes.
- (b) Heouene and eorþe. and al þat is . biloken is . in his  
 honde  
 He doþ al þat his wille is ' a watere . and eke on  
 londe.  
 He makede fysses in þe sea . and fuweles in the  
 lufte.  
 He wit and wald alle þing . and schop alle schafte.  
 He wes erest of alle þing . and euer byþ buten  
 ende.  
 He is on ewiche stude . wende hwer þu wende.  
 Þe þat godes wille doþ . ichwer may him fynde.  
 Hvyh rune he iherþ þe wot alle dede.  
 He þurh-syhþ . vych monnes þouk . wy hwat  
 schal vs to rede.  
 Þe þat brekeþ godes hes . and gulteþ so 10dome.  
 bwat schulle we seggen oþer don at þe muchele  
 dome.

## SECOND HALF

1. Explain *any four* of the following extracts, adding etymological and other notes where necessary :— 24

- (a) The swalwe Proignè, with a sorwful lay,  
 Whan morwe com, gan make hir weymentinge,  
 Why she forshapen was'; and ever lay  
 Pandare a-bedde, half in a slomeringe,  
 Til she so neigh him made hir chiteringe  
 How Tereus gan forth hir suater take,  
 That with the noyse of hir he gan a-wake.
- (b) For thilke day that I for cherisshinge  
 Or drede of fader, or of other wight,  
 Or for estat, delyt, or for weddinne  
 Be fals to yow, my Troilus, my Knight,  
 Saturnes daughter, Juno, thorngh hir might,  
 As wood as Athamante do me dwelle  
 Eternaly in Stix, the put of helle !
- (c) But prively somtyme yit they mette  
 By sleighte, and speken som of hir desyr ;  
 As, wry the gleed, and hotter is the fyr :  
 Forbede a love, and it is ten so wood.

This wal, which that bitwix hem bothe stood,  
Was colven a-two, right fro the toppe adoun,  
Of olde tyme of his fundacioun ;  
But yit this clifte was so narwe and lyte,  
It nas nat sene, dere y-nogh a myte.

- (d) He was an esy man to yeve penaunce  
Ther as he wiste to han a good pitaunce ;  
For unto a povre ordre for to yive  
Is signe that a man is wel y-shrive.  
For if he yaf, he dorste make avaunt,  
He wiste that a man was repentaunt  
For many a man so hard is of his herte,  
He may nat wepe al-thogh him sore smerte.
- (e) A marchant was ther with a forked berd,  
In mottelee, and hye on hors he sat,  
Upon his heed a Flaundrish bever hat ;  
His botes clasped faire and fetisly.  
His resons he spak ful solempnely,  
Sowninge alway thence of his winning.  
He wolde the see were kept for anything  
Bitwixe Middleburgh and Orewelle.
- (f) Now to the temple of Diane the chaste  
As shortly as I can I wol me haste,  
To telle yow al the descripcioun.  
Depeynted been the walles up and down  
Of hunting and of shamfast chastitee.  
Ther saugh I how woful Calistopee,  
Whan that Diane agreved was with here,  
Was turned from a woman to a bere,  
And after was she maad the lode-sterre.

2. 'Chaucer held up the mirror to his age, and presented to it the least 16  
distorted image of itself.' Examine and illustrate this statement.

Or,

Comment on the statement that Chaucer's humour is as protean in its 16  
variety as any of his other qualities, and illustrate your remarks by  
references to his characters and stories.

3. Render *one* of the following extracts into Modern English :—

- (a) Sir monk, na-more of this, so god yow blesse !  
Your tale annoyeth al this compaignye ;  
Swich talking is nat worth a boterflye ;  
For ther-in is ther no desport ne game.  
Wherfor, Sir Monk, or dan Piers by your name,  
I preye yow hertely, telle us somewhat elles,  
For sikerly, nere clinking of your belles,  
That on your brydel hang on every syde,  
By heven king, that for us alle dyd,  
I sholde er this han fallen doun for slepe.

(b) In the examyninge thanne of your conseilour, ye shul considere  
manye thinges. Alder first thou shalt considere, that in thilke  
thing that thou purposest, and upon what thing thou wolt have conseil,  
that verray trouthe be seyed and conserved ; this is to seyn, telle trewely  
thy tale. For he that seith fals may nat wel be conseilled, in that cas of  
which he lyeth.

## GROUP B (c)

## (HISTORY OF THE ENGLISH LANGUAGE)

*The questions are of equal value*

## FIRST HALF

*Attempt ANY THREE questions*

1. State Grimm's Law in its simplest form. What are the cases where this Law is not applicable? Show how Verner's Law explains the apparent anomalies in the operation of Grimm's Law, and actually extends it.
2. Explain the term *Umlaut*. How would you distinguish it from *Ablaut*? How many kinds of Umlaut are there in old English? Give illustrative examples of each kind.
3. Trace the development of the Germanic diphthongs *ai*, *au*, *eu*, and *iu* of accented syllables in the various Germanic languages. Illustrate your answer by suitable examples.

*Or,*

Annotate phonologically *any eight* of the following words :—

*curon, fet, brohte, fon, sweostor, bet, dagas, hwit, nerian, seon, bint, nied.*

4. How far is the verbal conjugation of Old English retained in Modern English? Discuss the new formations that have grown up in Modern English.

*Or,*

Discuss the two-fold declension of the adjective in Old English, explaining the affixes in relation to Germanic and Indo-European.

5. What is the principle underlying the classification of Old English nouns in their declension as *a-nouns*, *o-nouns*, *u-nouns*, *r-nouns*, *nd-nouns*, etc.? Illustrate your answer by suitable examples from Old English with Teutonic and Indo-European equivalents.

*Or,*

Trace the history of *any four* of the following suffixes used in Old English to form words :—

*—estre, —had, —ing, —ig, —sum, —weard.*

## SECOND HALF

*Answer ANY THREE questions*

1. Give an historical sketch of the Genitive case in English.
2. What classes of nouns are interchanged in English? Give examples from Old English, Middle English, and Modern English.
3. Give a short account of *any two* of the following :—  
The formation of the preterite of strong verbs; the substantive adverbs; the irregular verbs.
4. Write notes on *six* of the following :—  
laughter; sought; deem; it is me; for the nonce; meadow; choose; give; the *indefinite one*, the *suffix -red*.
5. Describe changes in Middle English spelling which are purely graphic.
6. Explain and illustrate the conventional character of language.

## GROUP B (d)

(EARLY GERMANIC AND FRENCH CLASSICS IN TRANSLATION  
IN RELATION TO ENGLISH LITERATURE)*The questions are of equal value**Answer only six questions*

1. Give a critical estimate of the quality of Germanic (Teutonic) Heroic Poetry in general, indicating how far its tradition has been preserved in Old English.
2. Indicate briefly the development of the Sigurd-Brynhild saga from the heroic lays of the *Edda* to the *Nibelungen Lied*.
3. Write a note on the Weland-legend, mentioning its Indo-European affinities as well as its continuation in English tradition.
4. Write a note on 'the Matter of France.'
5. Give a critical appreciation of the *Chanson de Roland*, and discuss its place in French and European literature.
6. Write a note on the treatment of love in Medieval French Poetry.
7. 'Chaucer intellectually belongs more to France than to his own country.' Discuss.
8. Write a note on the social conditions as reflected in the Middle French romances you have read.
9. Indicate how 19th century English romanticism tried to revive the Germanic spirit in England.
10. Write notes on five of the following :—  
*Volospa, For, Skirnir, Hugi, Etzel, Ganelon, Tristan, Aucassin, Oliver, 'The Descent of Odin', 'The Lovers of Gudrun', Trouvère, Troubadour.*

## GROUP B(e)

## (GOTHIC)

*The figures in the margin indicate full marks*

## FIRST HALF

*Attempt ANY FOUR of the following questions*

1. Render into Modern English :—

50

Amēn, giþa izwis : ni urrais in baúrim qinōnō máiza Iōhannē þamma dāupjandin; iþ sa minniza in þiudangardjai himinē, máiza imma ist. Framuh þan þaim dugam Iōhannis þis dāupjandins und hita þiudangardi himinē *anamahitjada*, jah anamahitjandans farwilwand þō.

Parse the italicized words. Write grammatical notes on *minniza* and *hita*.

2. Render into Modern English :—

Jah atgaggaðein inn *dauhter* Hērōdiadins jah plinsjandēin jah galeikandein *Heroda*, jah þaim riþanakumbjandam, qap þiudans du þizai máujai : bidei mik þishwizuh þei wileis, jah giba þus. Jah swōr izai, þatei þishwah þei bidjais mik, giha þus und halba þiudangardja meina.

Parse the italicized words. Write grammatical notes on *máujai* and *bidei*.

3. Render into Modern English :—

Jah sahwasuh saei gamrzjai sinana þize leitilanē þize galðubjandanē du mis, gōþ ist imma máis ei galagjaiðau asiluqarnus ana balsaggan is, jah frawaurpana *wesi* in marein. Jah jabai marsjai þuk handus þeina,

*afmáit þó; gōþ þus íst hamfamma ín líbáin galeiþan, þáu twós handuns hobandín galeiþan ín gatafannan, ín fón þata unhwapuando, þarei maþa izē ní gaswiltiþ, jah fón ní afhwapniþ.*

Parse the italicized words. Decline *fón*

4. Render into Modern English :—

Paruh módag warþ jah ní wilda inn gagan, iþ atta is uszagands út bad ina. Paruh is andhafjands qaþ du attin: sái, swa filu jērē skalkinōða þus, jah ní hwanhun anahusu þeina u fariddja, jah mis ní áiw atgaft gáitein, ei miþ frijōdam meinaim biwēsiau; iþ þan sa sunus þeina, saei frát þein swēs miþ kalkjōm, gam, usndiat imma stinr þana alidan.

Write grammatical or etymological notes on any four of the italicized words.

5. Render into Modern English :—

Paruh qaþ imma Iudas, ní sa Iskarjōtēs: fráuja, hwa warþ, ei unsis munáis gabafritjan þuk silban, iþ þizai manasēddi ní? Andhōf Iēsus, jah qaþ du imma: jahái hwas mik frijōþ, jah waurd mein fastáiþ, jah atta meins frijōþ ina, jah du imma galeiþōs, jah salíþwōs at imma gatáuōs. Iþ saei ní frijōþ mik, þō waurda meina ní fastáiþ: jah þata waurd þatei háuseiþ, níst mein. ak þis sandjandins mik, attins.

Parse the italicized words.

6. Render into Modern English :—

Fraþei þatei qíþa; gíbiþ áuk þus fráuja trapi us alláim. Gamuneis Xristu Iēsu urrisanaana us dáuþaim, us fráíwa Daweidis bi atwaggeljōn meinái, in þizáiri arbáidja, und bandōs swe ubiltōjis; akei waurd guþs níst gabundan. Inuh þis all gaþōla, bi þans gawalidans, ei jah þái ganist gatilōna, sei ít in Xristáu Iēsu miþ wulþáu dāweinamma.

Derived any four of the italicized words.

## SECOND HALF

1. Give the Old English equivalents of any five of the following words, and account philologically for the differences between the Old English and the Gothic forms: *maiza* (Ext. 1), *dauhter* (Ext. 2), *galaubjandane* (Ext. 3), *gaitein* (Ext. 4), *atgaft* (Ext. 4), *hwa* (Ext. 5), *hauseiþ* (Ext. 5), *dáuþaim* (Ext. 6). 10

2. Gothic has been called 'the oldest representative of the Teutonic branch'. Show by comparative examples why it is to be regarded as older than Old English. 10

Or,

Point out the principal difference between Gothic and Old English in respect of the conjugation of Strong Verbs.

3. Decline *sunus* or *mamma*. Compare *gōþs*. Give the different parts of *warþan* or *slahan*. Conjugate either *haitan* or *nasjan* in the Present and Preterite Indicative Singular (Active Voice). 10

4. Render into Modern English :—

Paruh qaþ du in, Gibiþ im jus matjan. Iþ eis qeþun du imma, Nist hindar (among) uns maizo fimf hlaibam jah fiskos twai; niba þau þatei weis gaggandans buzjaima allai þizai manasēdai matins Wesun auk swe fimf þusundoþos wairē Nimands þan þans fimf hlaibans jah twans fiskans, insaihwands du himina, gaþinþida ins, jah gabrak, jah gaf sipoþam, du saurlagian þizai managein. Jah matidedun, jah sadai waurþun allai; jah ushafan warþ þatei adifnoda im gabrukō, tainjons twalif. (Lanke : IX, 13—17). 20

## GROUPS A AND B.

(ESSAY)

## EIGHTH PAPER

*The figures in the margin indicate full marks*

Write an essay on one of the following subjects :—

100

- (a) Poetry as criticism and interpretation of life.
- (b) Epic and Romance.
- (c) Literature and Civilization.
- (d) Where snow falls, there is Freedom.
- (e) Influence of Western thought on Bengali literature.
- (f) G. K. Chesterton or W. B. Yeats—an appreciation.
- (g) The English Drama in the twentieth century.
- (h) Browning at his best as the most human and comprehensible of poets.
- (i) Mysticism and Life.
- (j) King Demos.
- (k) Nordic Supremacy.
- (l) Prospects of English as an international language.

## SANSKRIT

## FIRST PAPER

(Internal)

PANDIT KOKILESWAR BHATTACHARYYA, M.A.  
 PROF. D. R. BHANDARKAR, M.A., PH.D.  
 DR. PRABHATCHANDRA CHAKRABARTI, M.A., PH.D.  
 ,, SATKARI MUKHERJEE, M.A., PH.D.  
 MR. KSHITISCHANDRA CHATTERJEE, M.A.  
 DR. HEMCHANDRA RAYCHAUDHURI, M.A., PH.D.  
 PANDIT SAKALNARAYAN SARMA  
 VEDANTAVISARAD N. S. ANANTAKRISHNA SASTRI.  
 PANDIT SITARAM SASTRI.  
 ,, HARGOVIND DAS SETH.  
 MAHAMAHOPADHYAY GURUCHARAN TARKADARSANA-  
 TIRTHA.  
 DR. AMARESWAR THAKUR, M.A., PH.D.  
 MR. DEBENDRANATH RAY, M.A.  
 PROF. SUNITIKUMAR CHATTERJI, M.A., D.LIT.  
 DR. BENIMADHAB BARUA, M.A., D.LIT.  
 PANDIT PANCHANAN TARKAVAGIS.  
 MAHAMAHOPADHYAY PROF. BHAGABATKUMAR  
 SASTRI, M.A., PH.D.  
 ,, PANDIT SITIKANTHA  
 VACHASPATI.  
 DR. PRABODHCHANDRA BAGCHI, M.A., PH.D.  
 ,, HEMCHANDRA RAY, M.A., PH.D.

Examiners—

(External)

MM. RAMKRISHNA TARKATIRTHA.  
 PANDIT SIBAPRASAD BHATTACHARYYA, M.A.  
 ,, UPENDRANATH VIDYABHUSHAN.  
 ,, NALINIMOHAN SASTRI, M.A.  
 ,, LAKSHMINARAYAN VEDA-SASTRI, M.A.



Examiners— (contd.)	{	MAHAMAHOPADHYAY DR. GANGANATH JHA, M.A., D.LITT.,
		PRAMATHANATH TARKABHUSHAN.
		PANDIT VIDHUSEKHAR SASTRI.
		MM. S. KUPPUSWAMI SASTRI, M.A., I.E.S.
		DR. SURENDRANATH DASGUPTA, M.A., PH.D.
		PANDIT GOPINATH KABIRAJ.
		PROF. LAKSHMAN SWARUP.
		DR. I. J. S. TARAPOREWALA, B.A., PH.D.
		PANDIT HARIHAR BANERJEE, M.A.
		PROF. BANAMALI VEDANTATIRTHA, M.A.
		DR. SUDHENDUKUMAR DAS, M.A., PH.D.
		,, NIRANJANPRASAD CHAKRABARTI, M.A., PH.D.
		,, V. S. SUKTHANKAR.
		MM. DURGACHARAN SANKHYA-VEDANTATIRTHA.

The figures in the margin indicate full marks

### FIRST HALF

The FOURTH question and ANY TWO of the remaining questions are to be answered

- नदं न भिन्नममुया शयानं मनोरुहाणा अतियन्त्यापः ॥ 20  
याश्चिद्वक्षो महिना पर्यतिष्ठत्तासामहिः पत्सुतःशीर्बभूव ॥ १ ॥  
न्याविध्यदिलीबिशस्य दृळ्हा विशृङ्गिणमभिनच्छुष्णमिन्द्रः ॥  
यावत्तरो मधवन्त्यावदोजो वज्रेण शलुमवधीः पृतन्युम् ॥ २ ॥  
लयः पवयो मधुवाहने रथे सोमस्य वेनामनुविश्व इद्विद्वुः ॥  
त्रयः स्कम्भासः स्कभितास आरभे त्रिनक्तं याथस्त्रिर्वश्विना दिवा ॥ ३ ॥  
तिस्रो धावः सवितुर्द्वा उपस्था एको यमस्य भुवने विराषाद् ॥  
आणिं न रथ्यमभृताधितस्थुरिह ब्रवीतु यउ तच्चिकेतद् ॥ ४ ॥  
हिरण्यहस्तो असुरः सुनीयः सुमृलीकः स्ववांयात्यर्वाह् ॥  
अपसेधनक्षसो यातुधानानस्थादेवः प्रतिदोषं गृणानः ॥ ५ ॥  
ऋषिच्छन्दोवैवतविनियोगनिर्देशपुरस्सरं किमपि ऋक्स्यं व्याख्यायताम् ।

असुरः । तूर्णयः । एहिमायासः । जिहीकानस्य । द्रापिम् । 20  
 सिकन्दकेषु । तूतजानः । रीरधः । अयुयुत्सन् । जोहवीमि । एषां  
 शब्दानां संसिद्धिमर्थोश्च विलिख्य, सारस्वते तृचे या प्रथमा सान्वारम्भणीयेष्टौ  
 सरस्वत्याः पुरोऽनुवाक्या ॥ अग्निष्टोमे माध्यन्दिने सवने निष्केवक्ष्यशस्त्रे  
 इन्द्रस्य नु वीर्याणीति निविद्वानीयम् ॥ इति भाष्यपङ्क्त्योराशय उपवर्ण्यताम् ।

3. सविलक्षितोमानां रूपाणि यथासम्भवं कालांश्च निर्दिश्य देवतानां 20  
 कालवर्णनाभिप्रायो विलिख्यताम् ।

(a) सिद्धं वां सुरे दुहितारुहद्रथम् । (b) नदं न भिन्नम् । अत्र  
 प्रथमे का दुहिता ? को रथः ? कथं सिद्धत्वं तस्य ? कीदृशत्वं भाष्याभि-  
 प्रायः ? का वा भाष्योक्ता कथा ? अपि नाम प्रकारान्तरेणैतदंश-  
 व्याख्यानसम्भवः ? सति तथा विलिख्यतां सूपपत्ति । द्वितीये न-शब्दस्य  
 कतिविधोऽर्थो वेदे ? प्रमाणमुपन्यस्य प्रकृते तदर्थो निर्णीयताम् ।

4. आथर्वणायाश्चिना दधीचेऽङ्ग्यं शिरः मत्स्यैरयतम् । 10

सवां मधु प्रावोचदतायन् त्वाष्ट्रं यद्वस्त्रावपि कक्ष्यं वाम् ।

अत्रत्यां भाष्योक्तां कथामुल्लिख्येयं मन्त्रं व्याख्याय, उपब्रह्मणि  
 वाघतः । इति मन्त्रांशे स्वरसञ्चारो विलिख्यतां सप्रमाणम् ।

## SECOND HALF

Answer the FIRST and ANY TWO of the rest

1. ये तावदप्रवृत्तप्रवर्तकेषु कर्मविधिषु अज्ञातज्ञापकेषु ब्रह्मविधिषु च 20  
 प्रामाण्यं नेच्छन्ति तेषां शुक्लीरूपन्यस्य विस्तरशो निरस्य च सायणोक्तदिशा  
 विधिभागस्य प्रामाण्यं स्थाप्यताम् ।

2. यैः सूत्रैर्जैमिनिनाऽर्थभागस्य प्रामाण्यं सम्यादितं तानि पूर्वपक्षीय- 15  
 सूत्रव्याख्यानमुखेन वैशद्येन व्याख्यायन्ताम् ।

3. वेदस्य विषयप्रयोजनसम्बन्धाधिकारिणः के इति प्रमाणोपदर्शनपूर्वकं 15  
 स्पष्टं निर्दिश्यताम् ।

4. वेदाध्ययनानन्तरं तदध्ययनविध्यर्थं ज्ञानम्, ज्ञानानन्तरं चाध्ययन- 15  
 प्रवृत्तिरित्यन्योन्याश्रयदोषः कथं परिहरणीयः ?

अध्ययनस्य दृष्टार्थत्वमदृष्टार्थत्वं वेति स्वसिद्धान्तानुसारेण प्रमाणा-  
 न्युपन्यस्य निरूप्यताम् ।

## SECOND PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. (a) सम्बुद्धाक्षिसस्याङ्गस्यैह-ह्रस्वाभ्यां विशेषणाच्चेह एकवत्, 10  
कुचेति ।

(b) तमब-ग्रहणं किं गङ्गायां घोषः ।

(c) पञ्चाजी अन्न हि समासार्थ-समाहारनिष्ठं स्त्रीत्वम् । अत्र  
कस्याश्चिदेकस्याः फक्किकाया आशयो वर्णनीयः ।

2. वृक्षज्ञः, सर्वस्मै, उभये, अजा, रामाणाम्, संस्कृता । अत्र 10  
केषाञ्चित्प्रयाणां पदानां साधुत्वं कार्यम् ।

3. अपादानसंज्ञा-विधायकानि कानिचिच्चत्वारि सूत्राणि सोदाहरणानि 10  
लेख्यानि ।

4. किति ह्रस्वश्च । आङि चापः । ऊमो ह्रस्वादचि ऊमुण् नित्यम् । 10  
कृत्यानां कर्तरि वा । कर्तृकरणे कृता बहुलम् । ईदग्नेः सोमवरुणयोः—  
अन्न केषाञ्चित् त्रयाणां सूत्राणामर्थः सोदाहरणाः प्रकटीकरणीयाः ।

5. समस्यमाने ह्येकत्ववाचिनी युष्मदस्यदी, समासार्थोऽन्य- 10  
संख्यश्चेत् स्तो युवावौ त्वमावपि । व्याख्यायतामियं कारिका ।

## SECOND HALF

*Answer the FIRST question and ANY TWO of the rest*

1. (a) Explain any three of the following *sūtras* with examples :— 20

छिटि धातोरनभ्यासस्य । छिट्यन्यतरस्याम् । णिचश्च । अदभ्यस्तात् ।  
उतश्च प्रत्ययादसंयोगपूर्वात् । कृत्यचः । वेत्तेर्विभाषा । असिद्ध-  
वदत्ताभात् ।

(b) How would you support the correctness of both समेयात् and  
समीयात् ?

(c) Account for the absence of लृत्व in निरयते and दुरयते.

(d) Explain अन्तरङ्ग and बहिरङ्ग, and bring out the full import of  
the dictum—‘असिद्धं बहिरङ्गमन्तरङ्ग’.

2. Comment on the following :—

15

(a) एकाच इति किं यङ्लुग्भ्यावृत्तिर्यथा स्यात् ।

(b) चिन्तेति पठितव्ये ह्रस्विकरणं णिचः पाक्षिकत्वे छिङ्गम् ।

(c) कर्त्तृभिर्प्राये किं ऋत्विजो यजन्ति ।

3. Explain the formation of any five of the following, citing important rules in each case :— 15

उवोख । आस । वव्रश्च । अपीष्टयत् । विष्मापयते । तितांसति ।  
सपत्नायते । वरीवर्ति । अजैषीत् । यक्षीष्ट ।

4. (a) Correct or justify— 15

‘नाथसे किमु पतिं न भूयताम्’ and ‘आजग्रे विषमविलोचनस्य वक्षः’ ।

(b) What is the force of च in ‘यहोऽचि च’ and ‘तत्प्रयोजको हेतुश्च’ ?

(c) Explain the rule ‘युष्मद्युपपदे समानाधिकरणे स्थानिन्यपि मध्यमः’, dealing specially with the grammatical implications of उपपद, समानाधिकरण and स्थानिन् .

### THIRD PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Answer Question No. 1 and ANY THREE of the remainder*

*Full Marks—66*

1. Compare the achievements of the ancient Hindu Grammarians with those of the modern ‘philologists’. 18
2. Define clearly a ‘vowel’. What position do the ‘sonants’ occupy among the Sanskrit sounds? 16
3. Write a note on the ‘diphthongs’ in Sanskrit and show how far we may determine their original pronunciation from the rule एचोऽयवायावः. 16
4. Write a note on Sanskrit compounds. 16
5. How would you classify the *avyayus* in Sanskrit? Discuss in some detail. 16
6. Write notes on the Sanskrit words for 4th, 100th, 8, and 1,000. 16
7. Discuss the uses of the ‘dative’ and the ‘locative.’ 16

#### SECOND HALF

*Answer ANY ONE of the first two questions and ANY TWO of the rest*

*Full Marks—34*

1. शाब्दबोचोऽनुमिति रिति मतस्थापन-खण्डनयोः कुतः कस्य सम्मता का युक्तिः ? 14
2. बाह्यकस्य प्रथमशक्तिज्ञानं कया रीत्या जायते ? 14
3. के आदिशक्तिवादिनः ? तन्मतखण्डने च कस्य सम्मता का युक्तिः ? 10

4. योगरूढनाम्नां यस्मिन् समासेऽन्तर्भावस्तस्य किं लक्षणम् ? 10  
 5. कस्य समासस्य कुतः लिङ्गसंख्या-व्यञ्जकत्वम् ? सोदाहरणमुत्तरं 10  
 कार्त्तव्यम् ।

#### FOURTH PAPER

*The figures in the margin indicate full marks*

##### FIRST HALF

Write an essay on *any one* of the following subjects :—

50

- The R̥gveda and the origin of the world.
- Basic conceptions of the Brāhmaṇa : Section of the Vedas.
- The Value of the Kalpasūtras in the development of Hindu Culture.
- The Hindu Law-givers and their moral value of the Hindu Law.
- Contributions of the philosophers to the growth of Hindu Culture.
- Hindu mind as reflected in Hindu poetry.
- Philosophy of Hindu Rhetoric.
- Keynote of Hindu stories and fables.
- Mortal and immortal speech.
- Hindu History and Hindu Historians.

##### SECOND HALF

Write an essay on *any one* of the following subjects :—

50

(a) Discuss the evolution of aesthetic judgment in Sanskrit literature, with special reference to the development of the theory of R̥sa as essence and as art communication.

Or,

The origin and development of Sanskrit drama with special reference to dramatic forms and the general nature of subject matter with apt references to the existing specimens of such literature.

(b) Compare or contrast the growth of religious life in the Vedas, Brāhmaṇas, and the Upaniṣads.

Or,

Discuss the various types of philosophical tendencies in the Upaniṣads, marking out their differences from the previous Vedic literature.

(c) Discuss clearly the dependence of the Smṛti on the Mīmāṃsā in its fundamental aspects with suitable illustrations.

Or,

Trace the origin and development of the Dharmaśāstras.

(d) Trace the development of the schools of Advaita Vedānta in the post-Śaṅkara period, marking out their fundamental differences.

Or,

Trace the growth of the Vedānta dialectic and its relations to the Buddhist dialectic.

(e) Discuss the principal schools of Sāṃkhya, with special references to their cardinal differences.

Or,

Discuss fully the problems of karma, rebirth and God in Sāṃkhya and Yoga.

(f) Discuss the problems of Nyāya epistemology, with apt critical references to their Buddhistic opponents.

Or,

Trace the origin and development of the Nyāya and Vaiśeṣika literature historically, marking out the philosophic advances from stage

(g) Discuss the problem of God in Nyāya, Vedānta, Sāṃkhya, Yoga, and Mīmāṃsā.

Or,

Discuss the problem of causality and evolution in Nyāya, Vedānta, Sāṃkhya, and Yoga.

(h) Discuss the problem of the relation of Prakrit to Sanskrit.

Or,

Give a critical estimate of Kaṭṭhāraṇīyari.

(i) Discuss the problem of the origin of scripts in India and their development.

Or,

Describe the social and religious condition of India from 3rd century B.C. to 7th century A.D. from Inscriptional sources with apt references.

### (GROUP A)

### FIFTH PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

1. निम्नलिखितश्लोकेषु प्रथमद्वितीययोस्तृतीयचतुर्थयोर्वा वक्तृबोद्धव्य- 26  
प्रकरणनिर्देशपूर्वकं टीकाकाररीत्या व्याख्यानमाख्यायताम् । एवं प्रथम-  
श्लोकद्वितीयाहस्य व्याकरणप्रक्रियापि प्रदर्शनीया :—

(१) विभज्य मेरु-र्न यदर्थि साःकृतो  
न सिन्धुस्तसर्गजलव्ययै-र्मरुः ।  
अमानि तत्ते न निजायशोयुगं  
द्विफालवद्धाश्चिकुराः शिरस्थितम् ॥

(२) सम्भृतोपकरणेन निर्ममंकां  
कत्तुमिष्टिमभिवाञ्छता मया ।  
त्वं समीरण इव प्रतीक्षितः  
कर्षकेन वलजान् पुपूषता ॥

- (१) निमीलनभ्रंशयुषा दशा भृशं  
निपीय तं यस्मिदशीभिरर्जितः ।  
अमूखादभ्यासभरं विवृण्वते,  
निमेषनिःस्वैरधुनापि लोचनैः ॥
- (४) भस्य साङ्ख्यपुरुषेण तुल्यतां  
बिभ्रतः स्वयमकुर्वतः क्रियाः ।  
कर्त्तृता तदुपलम्भतोऽभव-  
द्वृत्तिभाजि करणे यथर्त्तिजि ॥

2. वक्तृबोद्धव्यप्रकरणनिर्द्देशपूर्वकं निम्नलिखितश्लोकयोस्तात्पर्यं 12  
स्वकीय-संस्कृतभाषया विस्तार्यताम् :—

- (१) त्वदग्रसूच्या सचिवेन कामिनो-  
र्मनोभवः सीव्यति दुर्यशः-पटौ ।  
स्फुटश्च पत्रैः करपत्रमूर्त्तिभि-  
र्व्वियोगिह्वहारुणि दारुणायसे ॥
- (२) असुरस्त्वया न्यवधि कोपि  
मधुरिति कथं प्रतीयते ।  
दण्डदक्षित-सरधः प्रथसे  
मधुसूदनस्त्वमिति सूदयन् मधु ॥

अथवा,

नैषधचरितस्य सप्तदशसर्गवर्णितविषयाः स्वकीय-संस्कृत-भाषया  
संक्षेपतो लिख्यन्ताम् ।

3. शिशुपालवध-नैषधचरितयोः कतरत् कया युक्ता श्रेष्ठतया श्रीमते 12  
रोचते ?

## SECOND HALF

1. Write a short dissertation either in English or in Sanskrit on any 15  
one of the following :—

- (a) Origin of Hindu constitution, the basic principle of that consti-  
tution, and its subsequent modifications.  
(b) The objects with which war was waged in Hindu India.  
(c) Taxation in Hindu India.  
(d) Treaties and alliances in Hindu India.  
(e) The Spy system in Hindu India.  
(f) The jigsaw ( जिगीसु ) and his mapdala ( मण्डलः ).  
(g) Reliable and unreliable evidence in the Court of Law.

2.

*Either.*

10

Explain and illustrate symbolically as well as from history any two of the three :—

आसन, द्वैधभाव and आश्रय ।

*Or,*

Explain the seven departments of royalty ( सप्तङ्गानि ) and their importance.

*Or,*

Explain the various types of fortification.

3. Translate into simple Sanskrit :—

25

It is a terrible night ; distant clouds are thundering ; there has been a continuous downpour since nightfall ; the river before the prince is not at all fordable ; waves after waves, all of them mountain-high, have been overflowing the embankments ; and to cross such a river at such a time and under such conditions ! Well, the thought is horrible. But cross he must. The Child—the Divine Child—in his arms must be taken to Gokula—Nanda's home, for safety and then he must return—all in a short space of time. If the guards awake, he will be lost, the Child will be lost. The prince plunges into the stream. Lo ! the waves disappear. Wherever he plants his foot the waters appear to be shallow. The river then is easily crossed.

## SIXTH PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

1. Write, in San-krit, a short thesis on one of the following 11  
extracts :—

- (a) अहो निर्धनता सर्वापदाम् आस्पदम् ।
- (b) गुणेष्वेव हि कर्तव्यः प्रयत्नः पुरुषैः सदा ।
- (c) जलं कूलावपातेन प्रसन्नं कलुषायते ।
- (d) सेवां लाघवकारिणीं कृतघ्नियः स्थाने श्रवृत्तिं विदुः ।

2. Explain fully one stanza from each group with reference to the 28  
context, discussing grammar and rhetoric necessary for elucidation :—

### GROUP A

- (a) त्वत्कार्यं वासवः कुर्यात् त्वं च तस्येष्टकार्यं कृत् ।  
सूर्यः संवर्द्धयत्यग्निमग्निः सूर्यं स्वतेजसा ॥
- (b) परस्परविरोधिभ्योरेकसंश्रयदुर्लभम् ।  
स्वतः श्रीसरस्वत्योभूयादुद्भूतये सताम् ॥
- (c) आभरणस्त्राभरणं प्रसाधनविद्ये प्रसाधनविशेषः ।  
वपमानस्यापि सखे प्रत्युपमानं वपुस्तथाः ॥



- (d) प्रणयिषु दाक्षिण्यादथवा सद्रस्तुपुरुषबहुमानात् ।  
शृणुत जना अवधानात् क्रियामिर्मा कालिदासस्य ॥

## GROUP B

- (a) किं कुलेनोपदिष्टेन शीलमेवात्र कारणम् ।  
भवन्ति सुतरां स्फीताः सुक्षेत्रे कण्टकिद्रुमाः ॥
- (b) लिम्पतीव तमोऽङ्गानि वर्षतीवाञ्जनं नभः ।  
असत्पुरुषसेवेव दृष्टिर्विफलतां गता ॥
- (c) केयमभ्युद्यते शस्त्रे मृत्युवक्रगते मयि ।  
अनावृष्टिहते सस्ये द्रोणवृष्टिरिवागता ॥

## GROUP C

- (a) मयि जीवति मत्तातः केशग्रहमवासवान् ।  
कथमन्ये करिष्यन्ति पुत्रेभ्यः पुत्रिणः स्पृहाम् ॥
- (b) स कीचकनिसूदनो वकहिङ्गिम्बकिर्मीरहा  
मदान्धमगधाधिपद्विरदसन्धिभेदाशनिः ।  
गदापरिघशोभिना भुजयुगेन तेनान्वितः  
प्रियस्तव ममानुजोऽजुनगुरुर्गतोऽस्तं किल ।
- (c) शोकं स्त्रोवन्नयनसलिलं यत् परिब्याजितोऽसि  
भ्रातुर्वक्षःस्थलविघटने यच्च साक्षीकृतोऽसि ।  
आसीदेतत् तव कुनृपतेः कारणा जीवितस्य  
क्रुद्धे युष्मत्कुलकमलिनीकुञ्जरे भीमसेने ॥

## GROUP D

- (a) निर्व्यङ्गं गुरुशासनं गुरुतरं धर्मोऽपि संरक्षितो  
रक्षःसंहरणाच्चिकित्सितमनोरोगा त्रिलोकी कृता ।  
सिद्धार्थाश्च सुराः सहानुजसुहृद्वारेण राज्यं पुन-  
र्लब्धं किं करणीयमेतदधिकं श्रेयस्तदद्योच्यताम् ॥
- (b) आनन्दाय च विस्मयाय च मया दृष्टोऽसि दुःखाय वा  
वैतृष्ण्यं तु ममापि सम्प्रति कुतस्त्वद्दर्शने चक्षुषः ।  
त्वत्साङ्गत्यसुखस्य नास्मि विषयस्तत् किं वृथाव्याहृतै-  
रस्मिन् विश्रुतजामदग्न्यदमने पाणौ धनुर्जुम्भताम् ॥
- (c) न तस्य राष्ट्रं व्यथते न भ्रश्यति न जीर्यति ।  
त्वं विद्वान् ब्राह्मणो यस्य राष्ट्रगोपः पुरोहितः ॥
- (d) तुरीयो ह्येष मध्योऽग्निराम्नायः पञ्चमोऽथवा ।  
अथवा जङ्गमं तीर्थं धर्मो वा मूर्त्तिसञ्चरः ॥

## 8. Answer one of the following questions :—

15

(a) Justify or impugn the following remarks of Dr. Winternitz as regards Kālidāsa, Bhavabhūti and Bhāsa : ' Kālidāsa and Bhavabhūti were no doubt greater poets, greater masters of language than Bhāsa, but in the whole of Sanskrit literature no drama could compare as a stage play with any one of the plays ascribed to Bhāsa, for all classical dramas are more or less book dramas, while the plays of Bhāsa are one and all the works of a born dramatist wonderfully adapted to the stage.'

(b) Compare Kālidāsa and Bhavabhūti as dramatists and playwrights.

(c) Compare the original sources of the विक्रमोर्वशीय of कालिदास or the महावीरचरित of भवभूति with the dramas themselves, noting carefully how the dramatists have differed from the original sources and how they have thereby raised their dramatic works far above the level of the original sources.

(d) Account for the nomenclature of the dramas मृच्छकटिक, वेणीसंहार, and विक्रमोर्वशीय, noting carefully how the names have all been formed just in accordance with the requirements of saint Bharata. What is your opinion about the authorship on the composition of the whole drama महावीरचरित by Bhavabhūti himself alone? Or what was the object of Bhavabhūti in the composition of his माक्षतीमाधव, and how did he try to make up for his inefficiency in comic composition there, and was he successful in his attempt?

(e) Compare Bhaṭṭanārayana as a dramatist with Bhavabhūti. Or who was the author of the मृच्छकटिक? When was it composed? To what type of dramatic works would you place the मृच्छकटिक and the वेणीसंहार? Why? Point out the heroes and the heroines of the two dramas in accordance with the laws of saint Bharata.

## SECOND HALF

1. What do you know of Bhavabhūti as a man of letters?

6

Or,

What internal and external evidence have you to determine his age?

2. (a) Render into Sanskrit and refer to the principal rules of Prākṛta grammar required to Sanskritize :—

6

हा ताद गिक्कहण, एसो दाणिं दे णरेन्दचित्ता राहणोवअरणं जणो विपज्जई । हा पियसहि छवक्किण्ण, सिविणअवसरमेत्तदंसणा अहं दे संवुत्ता ।

(b) Explain in Sanskrit one of following stanzas, using the context :—

5

(i) शान्तिः कुतस्तस्य भुजङ्गशलो-  
र्यस्मिन्निवदानुशया सदैव ।  
जागर्ति दंशाय निशातदंष्ट्रा-  
कोटिर्विबोद्गारगुरुर्भुजङ्गी ॥

मयूरतां नयन्ति अपरिमितयशःप्रकरवर्षी विकाशी वीररसः । पुरःप्रवृत्त-  
प्रतापप्रहताः पन्थानः पौरुषस्य । शब्दविद्रुतद्विषन्ति भवन्ति द्वाराणि  
दर्पस्य । शस्त्रालोकप्रकाशिताः शून्या दिशः शौर्यस्य । रिपुरुधिरस्त्रीकरा-  
सारेण भूरिव श्रीरप्यनुरज्यते । अनवरतशस्त्राभ्यासेन करतलानीव  
रिपुमुखानि श्यामीभवन्ति । न च स्वप्नदृष्टनष्टेष्विव क्षणिकेषु शरीरेषु  
निवसन्ति बन्धुबुद्धिं प्रबुद्धाः । स्थायिनि यशसि शरीरबुद्धिर्धराणाम् ।

Who speaks the above extract and to whom?

1

4. Give clearly the purport of each of the following sentences :—

6

छत्रमङ्गभीतेष्विव निगूढकोषेषु कुशेशयेषु, स्फुटितदिग्बधूहृदयरुधिरभ्रव  
इव गलिते रक्तातपे, लोकान्तरमुपगतवति अनुरागशेषे जाते तेजसामधीशे,  
नाकयथप्रस्थितपार्थिवप्रत्युद्गतपुरुहूतातपस इव पूर्वस्यां दिशि दृश्यमाने  
चन्द्रमसि ।

5. Translate into English :—

25

अथ उपरते पितरि, भ्रातृ-भ्रातृव्यवान्धवैः स जडभरतः कदम्बाहार-  
पोषितः, श्वेतकर्मादिकारित आसीत् । उक्षतुल्यपीनावयवः कर्मणि च  
जडकारी सः आहारमात्रवेतनो बभूव । एकदा सौवीरराजस्य क्षत्ता  
(Door-keeper) तं तादृशप्रसंस्कारविप्राकृतिचेष्टितं दृष्ट्वा जडभरतम्, विष्टियोग्य  
(A Palanquin-bearer) ममन्यत । सौवीरराजस्तु शिविकारूढः इक्षुमती-  
तीरे कृताश्रमस्य कपिलर्षेराश्रमं गन्तुं कृतमतिर्बभूव । भरतः खलु  
विष्टिगृहीतानामन्येषां ज्ञानां मध्यगः सन्, तस्य क्षत्तुर्वचनेन नोदितः तस्य  
राज्ञः शिविकामुवाह । मतिमतां श्रेष्ठः स युगमात्रावलोकनं कुर्वन्  
जडगतिर्यथै । तदन्ये तु स्वरितगतिर्यथुः ।

## EIGHTH PAPER

### FIRST HALF

The questions are of equal value

1. “आकाङ्क्षायोग्यतासन्निधिवशाद् वक्ष्यमाणस्वरूपाणां पदार्थानां  
समन्वये तात्पर्यार्थो विशेषवपुरपदार्थोऽपि वाक्यार्थः समुल्लसतीति अभि-  
हितान्वयवादिनां मतम्” । इति मूलं प्रतिपदतात्पर्यप्रकाशनपूर्वकं  
व्याख्यायताम् । यदि अपदार्थस्यापि वाक्यार्थभानमुपेयते, तदा अक्षय-  
स्वाविशेषात् गगनादेरपि भानं कथं वारणीयम् ? कश्च अभिहितान्वयवादः ?  
अन्विताभिधानवादश्च कया युक्त्या केषां सम्मतः ? मम्मटस्य अनयोः  
कतरस्मिन् वादे स्वरसः ?

2. जातिपदार्थवादः कीदृशः ? केषां चार्थं वादः सम्प्रतिपन्नः ? अस्मिन्पक्षे आकाशविरह-शून्यादिपदानां कुत्र शक्तिग्रहः ? उपाधिपदार्थ-वादिनामपि मते काऽत्र गतिः ? किञ्च जातिपदार्थवादेऽपि व्यक्तेर्भाजनं न लक्षणया किन्तु आक्षेपेणैव इति मम्मटव्याख्यानस्य किं निबन्धनम् ? तस्य लक्षणाङ्गीकारे की दोषः ? सयुक्तिकमुपपादनीयम् ।

अथवा

रसाभास इत्यस्य कोऽर्थः ? रसाभासे रसत्वमस्ति न वा ? तिर्थ्यगादिगतत्वे रसाभास एव इति मतं समीचीनमसमीचीनं वेति सयुक्तिकं प्रतिपादनीयम् । अनौचित्यस्य रसाभासत्वप्रयोजकत्वे किं बीजम् ? किञ्च, अलौकिकचमत्कारात्मनः आनन्दस्वभावस्य रसस्य कथमपकर्षः आत्महानिर्वा सम्भवेत् ? तदसम्भवे च दोषगुणरसाभासकथा कथं नास्तमियात् ? सोपपत्तिकं समाधानं क्रियताम् ।

3. “यत्परः शब्दः स शब्दार्थः” इति क्लृप्तेन तात्पर्येणैव व्यङ्ग्यपदार्थ-प्रतीतिं गतार्थयतां मीमांसकानां मतं खण्डय । किञ्च, “भमवन्मिअवीसद्धो” इत्यादिस्थले अनुमानेनैव व्यङ्ग्यप्रतीतिसम्भवे आलंकारिकाणां व्यञ्जनाङ्गीकार-गौरवं कथं परिहरणीयम् ? कीदृशश्चात्र अनुमानप्रकारः तत्र च के दोषाः ?

अथवा

“अपास्य च्युतसंस्कारमसमर्थं निरर्थकम् ।

वाक्येऽपि दोषाः सन्त्येते पदस्यांशेऽपि केचन” ॥

इत्यस्य च्युतसंस्कारादीनां वाक्यदोषकोटितो व्युदसने को हेतुः ? अवाचकस्यापि असमर्थसमानशीलस्य कथं न व्युदासः कृतः ? किञ्च पदांशानां पदघटकतया पूर्वमुपस्थितानामेव दोषाननुक्रम्य अतिदेशेनैव पददोषेषु वक्तव्येषु कथं विपरीतक्रम एव आस्थितः मम्मटभट्टैः ?

4. रसनिष्पत्तिविषये भट्टनायकमतापेक्षया अभिनवगुप्तमते को विशेषः ? भावकत्व-भोजकत्वरूपव्यापारद्वितयं गुप्तपादानां सम्मतमसम्मतं वा ? अन्त्ये विभावादीनां साधारण्याभावे कथंकारं रसप्रतीतिः सम्भवेत् ? ‘व्यापारोऽस्ति विभावादेर्नाम्ना साधारणी कृतिः’ इति विश्वनाथमते विभावा-दीनां कथं साधारण्यसम्भवः ? नहि तैरेव तेषां साधारण्यम्, आत्मनि क्रियाविरोधात् युक्तानुभवानुरोधेन समाधानं कार्यम् ।

अथवा

सामान्यमीलितयोः, समासोक्तिशब्दशक्तिमूलज्वन्योः रूपकनिर्देशन-योः परस्परं वैलक्षण्यं लक्षणोदाहरणाभ्यां प्रतिपादय ।

## SECOND HALF

*The figures in the margin indicate full marks*

1. Explain clearly the principle underlying Viśvanātha's classification of *Kāvya*s and note and illustrate these subdivisions. Show how they are mutually exclusive and together exhaust all classes of *Kāvya*s. Does Bhoja seem to have any clear-cut notions on the subject? Give reasons for your answer. 8

2. Indicate the method of assigning any particular figure of poetry to any of the sub-classes—*Sadbālāṅkāra*, *arthālāṅkāra*, *ubhayālāṅkāra* in the scheme of Bhoja and of Viśvanātha. Write a note on any two of the following, both after Bhoja and Viśvanātha, mentioning the classes to which they belong :— 8

श्लेष, निदर्शना, अप्रस्तुतप्रशंसा and विरोध ।

3. Elucidate any three of the following extracts :— 9

- (i) हीनपात्रेषु तिर्यक्षु नायकप्रतियोगिषु ।  
गौणेष्वेव पदार्थेषु तमाभासं विजानते ॥
- (ii) अन्यद्धि शब्दानां व्युत्पत्तिनिमित्तमन्यच्च प्रवृत्तिनिवृत्तम् ।
- (iii) स्फुटं चमत्कारितया वत्सलञ्च रसं विदुः ।
- (iv) यत्तु केनचिदुक्तं 'माधुर्यं' द्रुतिकारणम्' इति तच्च,  
द्रवीभावस्यास्वादस्वरूपाह्लादाभिन्नत्वेन तत्कार्यत्वाभावात् ।

Or,

Specify the outstanding *alāṅkāra*, *deśa* or *guṇa* in any three of the following verses, and indicate whether they are *dhrvanikāvyas* or not :—

- (i) अर्थाहरगकौशल्यं किं स्तुमः शास्त्रवादिनाम् ।  
अव्ययेभ्योऽपि ये चाथोञ्जिष्कर्षन्ति सहस्रशः ॥
- (ii) अलंकारः शङ्काकर-नरकपालं परिजनो  
विशोर्गाङ्गो मृङ्गो वसु च वृष एको बहुवयाः ।  
अवस्थेयं स्थाणोरपि भवति सर्वोमरगुरो-  
र्विधौ वक्रे मूर्ध्नि स्थितवति वयं के पुनरमी ॥
- (iii) अगुरुरिति वदतु लोको गौरवमसौ पुनरहं मन्ये ।  
दर्शितगुणैव वृत्तिर्यस्य जने जनितदाहेऽपि ॥
- (iv) चित्तभूचित्तभूमत्तभूपालको-  
पासनावासनायासनानाक्रमैः ।  
साधुता सा धुता साधिता साधिता  
किं तथा चिन्तया चिन्तयामः शिवम् ॥

4. Translate into English all the verses in Question 3, or the following 25  
verses :—

आसीदस्ति भविष्यति क्षितितले कल्याणकर्म्यं पुरं  
नो दृष्टः श्रुत एव वा क्षितिपतिः श्रीविक्रमार्कोपमः ।

विज्ञानेश्वरपण्डितो न भजते किञ्चान्यदन्योपमा-  
माकल्पं स्थिरमस्तु कल्पलतिकाकल्पं तदेतत् स्वयम् ।

अष्टा वाचां मधुलवमुखां विद्वदाश्चर्य्यसीम्नां  
दाताऽर्थानामतिशयशुभामर्थिसार्थार्थनायाः ।  
ध्याता मूर्त्तैर्मुरविजयिनो जीवतादाकंचन्द्रं  
जेताऽरीणां तनुसहभुवां तत्त्वविज्ञाननाथः ॥

आ सेतोः कीर्त्तिराशे रघुकुलतिलकस्या च श्लोकाधिराजा-  
दा च प्रत्यक्षपयोधेश्चटुलतिमिकुलोत्तुङ्गरिक्ततरङ्गात् ।  
आ च प्राचः समुद्राक्षतनूपतिशिरोरत्नभाभासुराक्षिः  
पायादाचन्द्रतारं जगदिदमखिलं विक्रमादित्यदेवः ॥

## FIFTH PAPER

## FIRST HALF

*The questions are of equal value*

*Marks—50*

*Attempt ANY THREE, of which the LAST must be one*

1. What principle has been adopted by Yāska for the derivation of the Vedic words?
2. What is the relation between निघण्टु and निरुक्त ?
3. Give the arguments by which Sakapuni seeks to refute the view that the term द्रविणोदाः means अग्नि (fire god) and not इन्द्र.
4. Discuss the date of Panini, showing that he was prior to Yāska, if possible.
5. How are the Vedic deities to be determined from their respective mantras?
6. Explain clearly :—

(a) विश्वकर्मा विमना आद्विहाया धाता विधाता परमोत सन्दक् ।

तेषामिष्टानि स मिचामदन्ति यत्ता सप्तऋषीन् पर एकमाहुः ॥

(b) इदं विष्णुविचक्रमे वेधा निदधे पदम् ।

समूल्हमस्य पांसुरे ॥

## SECOND HALF

*The LAST question and ANY THREE of the remaining are to be answered*

1. ऋक्प्रातिशाख्यस्य वेदाङ्गत्वं भवति न वा ? वेदाङ्गत्वे वेदस्य षडङ्गत्व-  
वचनस्य कोपपत्तिः ?
2. ऋक्प्रातिशाख्ये छन्दःपटलत्रयस्य परिशिष्टरूपतामसंमकाङ्क्षितां च  
सप्रमाणं प्रदर्श्य युक्तं निर्णयिताम् ।
3. प्रग्राहः । उद्ग्राहः । प्रचितम् । प्रक्षितम् । औप्रम् । तैरोप्यजनः ।  
जात्यः । ग्रासः । सन्दष्टम् । परिपन्नः । एषां सोदाहरणाः पारिभाषिका अर्था  
विलिख्यन्ताम् ।
4. ऋतेनतोपाचरितक्रमस्वरान् । असावमुमिति तन्नावमुक्तं यथान्तरम् ।  
जात्यवद्वा तथा वान्तौ तनूशचीति पूर्वयोः । एषां सूत्राणां सोदाहरणं व्याख्या  
कार्या ।
5. प्रणइन्दो । उद्गुणः । योनिष्ट इन्द्रसदने अकारितमानृभिः पुरुहूत  
प्रयाहि । पान्तभावो वरेण्यम् । अत्र क्रमपर्यायरूपाणि प्रदर्श्य ऐयेः । हृदय्यया ।  
पुरुषन्तिम् । अत्र क्रियमाणान्दोषान्पारिभाषिक-नामोल्लेखपुरस्सरं विलिखत ।
6. अक्षरगणान्नामत उल्लिख्य वर्द्धमानाप्रतिष्ठागायत्र्योल्लेखं निर्द्दिश्य  
प्रस्तारनष्टोद्दिष्ट-स्वरूपाणि यथाछन्दोवृत्ति विलिखत ।

## SIXTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*The LAST question and ANY THREE of the remaining are to be answered*

*Full Marks—75*

1. संश्रवदोषं तन्निमित्तं तस्यादोषत्वस्थलं च निर्द्दिश्य सोमे दीक्षा- 20  
विकल्पसत्त्वे तं प्रदर्श्यैष्टिसोमयोः क्रमं सम्मीमांस्य ब्राह्मणयजमानस्य तत्क्रम-  
नियमो विचार्यताम् ।
2. सामिधेनीसासदृश्यस्य प्रकृतिविकृतिगामित्वे निर्णाय दीक्षणीयादौ 20  
तत्पुनर्विधानस्य प्रकृतिविकृतिभाववाचकत्वं वैश्वामित्रादावाज्यभागयोरिव भवति  
न वेति सप्रमाणमुच्यताम् ।

3. नराक्षसः। आज्यम्। निविद्वानम्। स्तोत्रियः। अनुरूपः। 20  
पर्वन्निष्करणम्। इळा। श्रंयुवाकः। व्यूढद्वादशाहः। भरतद्वादशाहः।  
दिवाकीर्त्यम्। अक्षिरसामयनम्। आदित्यानामयनम्। एषां पारि-  
भाषिकानर्थान्विलिख्य गवामयनेऽहःकलतिं प्रदर्शयत।

4. सोमपासोमपदेवानां वपाहोमेऽवदानानां च सङ्ख्यां तत्स्वरूपं च 20  
विलिख्याग्निहोत्रहविषोऽवस्थाभेदेन देवताविभेदो ब्राह्मणोक्तः प्रदर्श्यताम्।

5. अग्निष्टोमज्योतिष्टोमशब्दनिर्वचनं ब्राह्मणोक्तं विविच्य प्रदर्श 20  
अग्निष्टोमे पूर्वोत्तरक्रत्वन्तर्भावप्रकारो निरूप्यताम्। वषट्काराणां वज्र-  
भामञ्जद्विक्रूरुपतां विलिख्य परिसारकसूक्ताख्यायिका ब्राह्मणोक्तोलिख्य-  
ताम्।

6. ऋगब्राह्मणद्रष्टृजातिं सप्रमाणं निर्णय, एन्द्रवायवग्रहे इन्द्रतुरीयत्व- 15  
प्रकारो ब्राह्मणोक्तो विलिख्यताम्।

## SECOND HALF

Full Marks—25

1. Translate any one of the following extracts into simple classical 25  
Sanskrit, adding clear notes on the *Srauta* words where necessary :—

(a) विश्वे देवाः शास्तन मा यथेह होता वृत्तो मनवै यन्निषद्य ।

प्र मे ब्रूत भागधेयं यथा वो येन पथा हव्यमा वो वहानि ॥

अहं होता न्यसीदं यजीयान् विश्वे देवा मरुतो मा जुनन्ति ।

अहरहरश्चिनाध्वर्यवं वां ब्रह्मा समिदुभवति साहुतिर्वाम् ॥

अयं य होता किरु स यमस्य कमण्यूहे यत् समञ्जन्ति देवाः ।

अहरहर्जायते मासि मास्यथा देवा दधिरे हव्यवाहम् ॥

मां देवा दधिरे हव्यवाहमपम्लुक्तं बहु कृच्छाचरन्तम् ।

अग्निर्विद्वान् यज्ञं नः कल्पयाति पञ्चयामं सिद्धुतं ससतन्मुम् ॥

आ वो यक्ष्यसुतत्वं सुवीरं यथा वो देवा वरिवः कराणि ।

आ वाङ्मोर्षमिन्द्रस्य जेयामयेमा विश्वाः पृतना जयाति ॥



सी॒णि॒ श॒ता सी॒ सह॒स्रा॒ण्यग्निं॑ सिं॒हा॒श्च दे॒वा नव॑ चास॒पर्यन्॑ ।

औ॒क्षन् घृ॒तैर॑स्तृ॒णन् ब॒र्हि॒र॒स्रा आ॒दि॒द्धो॒तारं॑ न्य॒साद॑यन्त ॥

(b) प्र त्वा मु॒ञ्चामि॑ वरु॒णस्य॑ पा॒प्ताद॑येन त्वा॒ब॒ध्नात् स॒विता सु॒शेवः॑ ।

ऋ॒तस्य॑ यो॒नौ सु॒कृत॑स्य लो॒केऽरि॑ष्टां त्वा सह॒ पत्या॑ द॒धामि॑ ॥

पू॒षा त्वे॒तो न॑यतु ह॒स्तगृ॒ह्या॒श्विना त्वा प्र॑ व॒हता॑ र॒थेन॑ ।

गृ॒हान् गच्छ॑ गृ॒हप॑त्नी यथा॒सो व॑शिनी त्वं वि॒दथ॑मा व॒दासि॑ ॥

इ॒ह प्रि॒यं प्र॒जया॑ ते स॒मृ॒ध्यता॑म॒स्मिन् गृ॒हे गा॒र्हप॑त्याय जागृ॒हि ।

ए॒ना प॑त्या त॒न्वंऽसं॑ सृ॒ज॒स्वा॒धा जि॒व्री वि॒दथ॑मा व॒दाथः॑ ॥

गृ॒ह्णामि॑ ते सौ॒भग॑त्वाय ह॒स्तं म॒या प॑त्या ज॒रद॑ष्टिर्यथा॒सः ।

भ॒गो अ॒र्य॒मा स॒विता॑ पु॒रन्धि॑म॒ह्यं त्वा॒हुर्गा॑र्हप॒त्याय दे॒वाः ॥

आ नः॑ प्र॒जां ज॒नय॑तु प्र॒जाप॑तिराज॒रसा॑य स॒मन॑क॒र्ष॒मा ।

अ॒हुर्म॑ङ्ग॒च्छीः प॑तिलो॒कमा वि॑श शं नो भ॒व द्वि॑पदे शं चतु॒ष्पदे॑ ॥

अ॒घोर॑च॒क्षुर॑प॒ति॒घ्न॒प॒धि शि॒वा प॒शुभ्यः॑ सु॒मनाः॑ सु॒वर्चाः॑ ।

वी॒रसू॑र्दे॒वका॑मा स्यो॒ना शं नो भ॒व द्वि॑पदे शं चतु॒ष्पदे॑ ॥

(c) तस्यै॒वं वि॒दुषो॑ य॒ज्ञस्या॑त्मा य॒ज॒मानः॑ श्र॒द्धा प॒त्नी

शरी॑रमि॒ध्मसु॒रो वे॒दिर्लो॑मानि ब॒र्हि॒वे॒दः शि॒खा हृ॒दयं॑ यूपः॒ काम॑ आ॒ज्यं म॒न्युः

प॒शुस्त॑पोऽग्नि॒र्दमः॑ श॒मयि॑ता दक्षि॒णा वाग्॑होता प्रा॒ण उ॒न्ना॒ता च॒क्षुर॑ध्व॒युर्म॑नो

ब्र॒ह्मा श्रो॑त॒मग्नी॑द् यावद॒भ्रिय॑ते सा दो॒क्षा यद॑भाति तद॒विर्य॑त् पि॒बति॑ तद॒स्य

सोमपानं यद्रमते तदुपसदो यत् सञ्चरत्युपविशत्युत्तिष्ठते च स प्रवर्ग्यो  
यन्मुखं तदाहवनीयो या व्याहृतिराहुतिर्यदस्य विज्ञानं तज्जुहोति यत् सायं  
प्रातरस्ति तत् समिधं यत् प्रातर्मध्यन्दिनं च सायं च तानि सवनानि  
ये अहोरात्रे ते दर्शपूर्णमासौ येऽर्धमासाश्च मासाश्च ते चातुर्मास्यानि य  
ऋतवस्ते पशुबन्धा ये संवत्सराश्च परिवत्सराश्च तेऽहर्गणाः सर्ववेदसं वा  
पृतत् सत्तं यन्मरणं तदवभृथः ॥

(d) प्राणापानौ मृत्योर्मा पातं प्राणापानौ मा मा हासिष्टम् ।

कया नश्चित्त आभुवदूती सदावृधः सखा ।

कया शशिष्ठया वृता ॥

कस्त्वा सत्यो मदानां म हिष्टो मतसदन्धसः ।

दडाचिदारुणे वसु ॥

अभी शु णः सखी नामविता जरितृणाम् ।

शतं भवास्त्युतिभिः ॥

शं नो देवीरभिष्टये आपो भवन्तु पीतये ।

शं योरभित्तवन्तु नः ॥

ईशाना वार्या णां क्षयन्तीश्र्वर्षणीनाम् ।

अपो याचामि मेषजम् ॥

सुमित्रा न आप ओषधयः सन्तु दुर्मित्रास्तस्मै ।

भूवासुधौऽस्मान् द्वेष्टि यं च वयं विष्मः ।

आपो हि द्वा मयोभुवस्ता न ऊर्जे दधातन ।

महे रणाय चक्षसे ॥

यो वः शिवतमो रसस्तस्य भाजयतेह नः ।

उशतीरिव मातरः ॥

तस्मा अरं गमाम वो यस्य क्षयाय जिन्वथ ।

आपो जनयथा च नः ॥

#### SEVENTH PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Full Marks—75*

( ये केचन त्रयः प्रश्ना उत्तीर्त्यन्ताम् )

1. “यत्साक्षादपरोक्षाद्ब्रह्म य आत्मा सर्वान्तरस्तं मे व्याचक्ष्वेति” 25  
उपसक्तहोत्रप्रश्नयोरेकरूपत्वेऽपि याज्ञवल्क्योत्तरन्तु नैकरूपमवगम्यते ।  
किमभिप्रेत्य श्रुतौ एक एव प्रश्नः पुनरुपन्यस्तः प्रश्नैकरूप्येऽपि उत्तरवैचित्र्यं  
वा कथं जातमिति भाष्यावष्टम्भेन समाधानं लेख्यम् ।
2. पञ्चाग्निविद्या सङ्क्षिप्य वर्णनीया । 25
3. “कति देवा याक्षवल्केऽति शाकल्येन पुनःपुनः पृष्टेऽपि किमभिप्रेत्य 25  
याज्ञवल्केऽन प्रतिप्रश्नं भिन्नमुत्तरं दत्तम् ? याज्ञवल्कोत्तरवाक्यानां को  
निष्कर्षः ?
4. एष नित्यो महिमा ब्राह्मणस्य न वर्धते कर्मणा नो कनीयान् । 25  
तस्यैव ह्यात् पदवित्तं विदित्वा न लिप्यते कर्मणा पापकेनेति ऋचं सोपक्रमं  
व्याख्याहि ।
5. याज्ञवल्क्यमैत्रेयीसंवादं सङ्क्षिप्य तथा वर्णय यथा प्रकरणलौक्याय 25  
उपक्रम्येत । “स यथा दुन्दुभेर्हन्यमानस्येति” दुन्दुभिदृष्टान्तोपन्यासस्य  
कोऽभिप्रायः ?

6. भूमब्रह्मणः स्वरूपं निरूप्य भूमब्रह्मप्रकरणे “स एवाधस्तात्” 25  
 “अहमेवाधस्तात्” “आत्मैवाधस्तात्” इति आदेशसंयोजन्यासस्य तात्पर्यं  
 प्रदर्शय ।

7. “अथ ह वाचकस्युवाच ब्राह्मणा भगवन्तो हन्ताहमिमं द्वौ प्रभौ 25  
 प्रक्ष्यामी”त्युपक्रम्य “सा होवाच यदूर्ध्वं याज्ञवल्क्य दिवो यदर्वाक् पृथिव्या  
 यदन्तरा द्यावापृथिवी”त्यादिना एक एव प्रभः वारद्वयं पृष्टो गार्ग्यो न तु द्वौ  
 प्रभौ तथाच उपक्रमे प्रभद्वयोक्तिर्विरुध्येत । प्रभैकत्वेऽपि किमभिप्रेत्य  
 प्रतिप्रभावृत्ति-भिन्नमुत्तरं दत्तं याज्ञवल्क्येनेति यथाभाष्यमुत्तरं लेख्यम् ।

### SECOND HALF

1. Translate into English the following :—

25

(a) सति कर्मणः फलहेतुत्वे किमीश्वराधिककल्पनया ?—इति न  
 नित्यस्य ईश्वरस्य नित्यसर्वज्ञशक्तेः फलहेतुत्वं चेति चेत् ? न ; कर्मण एव  
 उपभोग-वैचित्र्यादि उपपद्यते । कस्मात्,—कर्तृतन्त्रत्वात् कर्मणः ।  
 चित्तिमत्-प्रयत्ननिवृत्तं हि कर्म ; तत्-प्रयत्नोपरमात् उपरतं सत्, देशान्तरे  
 कालान्तरे वा नियतनिमित्तविशेषापेक्षं कर्तुः फलं जनयिष्यतीति, न युक्त-  
 मनपेक्ष्य अन्यदात्मनः प्रयोक्तु ; कर्तैव फलकाले प्रयोक्तेति चेत्, मया  
 निर्वर्त्तितोऽसि त्वां प्रयोक्ष्ये फलाय यदात्मानुरूपं फलमिति न देशकाल-  
 निमित्तविशेषानभिज्ञत्वात् ।

(b) सत्येन लभ्यस्तपसा ह्येष आत्मा,  
 सम्यग् ज्ञानेन ब्रह्मचर्येण नित्यम् ।  
 अन्तः-शरीरे ज्योतिर्मयो हि शुभ्रो  
 यं पश्यन्ति यतयः क्षीणदोषाः ॥  
 नायमात्मा प्रवचनेन लभ्यो  
 न च प्रमादात् तपसो वाप्यलिङ्गात् ।  
 एतैरुपायैर्यतते यस्तु विद्वान् ।  
 तस्यैव आत्मा विशते ब्रह्म-धाम ॥  
 यस्त्वविज्ञानवान् भवति अमनस्कः सदाऽशुचिः ।  
 न स तत्पदमाप्नोति, संसारश्चाभिगच्छति ॥

## EIGHTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Full Marks—75*

अधःस्थप्रश्नेषु सप्त प्रश्नाः समाधेयाः तस्य च प्रथमद्वितीयो-  
रन्यतरोऽन्तर्भावनीयः ।

1. वैश्यकुळाद्वाऽम्बरीषाद्वाऽग्निमाहृत्याभ्यादध्यात् । 15  
अपि वा बहुयाजिन एवागाराद्वाह्वणस्य वा राजन्यस्य वा  
वैश्यस्य वा ।  
व्याख्यायतां सूत्रद्वयम्, पूर्वस्य वैश्यकुळादित्युक्तौ सत्यां परस्य वैश्यस्य  
वेति पुनरुक्तिर्घटते न वा ?
2. पुण्यस्त्वेवानर्द्धको भवतीति । 15  
यथा कामयेत तथा कुर्यात् ।  
टीकाकारदिशा व्याख्यायतां सूत्रद्वयम् ।
3. सूत्रकारेण अग्न्याधाने कतिविधाः कालाः निर्दिष्टाः ? काश्च 10  
ता विधाः यथाशक्ति सूत्रमुल्लिख्य प्रदर्शयताम् ।
4. यज्ञोपवीति-प्राचीनावीतिनोः किं लक्षणं सूत्रकारदिशा प्रदर्शयताम् । 10  
कुल वा तयोरुपयोगित्वम् ?
5. प्रत्युपस्पर्शने कानि निमित्तानि, सूत्रोद्धेखेन वा स्वया संस्कृतभाषया 10  
वा प्रदर्शयताम् ।
6. ब्रह्मयज्ञे सायं-प्रातर्होमयोः को मन्त्रः ? कया रीत्या वा स होमः 10  
कर्तव्यः ? अपि चेत् सूत्रं स्मृतिपथमारोहेत् लिखयताम् ।
7. प्राजापत्या पूर्वाहुतिर्भवति सौविष्टकृत्युत्तरा । 10  
अस्य जिज्ञास्यते ; एषा आहुतिः कस्मिन् विधौ कर्तव्याः तस्य  
विधेर्नित्यत्वं काम्यत्वं वा ?
8. उपस्तीर्णाभिधारितम्, पञ्चावत्तं अयातयामता, अभिचारणम्, एतेषां 10  
पदानां केऽर्थाः ?
9. प्राक् स्विष्टिकृत आवापः । 10  
न श्रुवमनुग्रहरेदित्येक आहुः ॥  
सूत्रद्वयं व्याख्याहि ।
10. का नाम अष्टका, सा च कतिविधा, कस्मिन् कस्मिन् मासि तस्याः 10  
कर्तव्यता ? तत्र कानि द्वय्याणि निर्दिष्टानि, तत्तद्व्याभावे केन द्वयेण तासां  
कर्तव्यता ?

## SECOND HALF

Translate into idiomatic Sanskrit :—

25

(a) Let every Brāhmaṇa, concentrating his mind, fully recognize in the Self all things, both the real and unreal, for he who recognizes the universe in the Self, does not give his heart to unrighteousness. The Self alone is the multitude of the gods, the universe rests on the Self; for the Self produces the connexion of these embodied spirits with action. He who thus recognizes the Self through the Self in all the created beings, becomes equal-minded towards all, and enters the highest state.

(b) The eternal lore of the Veda upholds all created beings; hence I hold that to be supreme, which is the means of securing happiness to those creatures.

As a fire that has gained strength consumes even trees full of sap, even so he who knows the Veda burns out the taint of his soul which arises from evil acts.

The three kinds of evidence, perception, inference, and the sacred Institutes which comprise the tradition of many schools, must be fully understood by him who desires perfect correctness with respect to the sacred law.

He alone, and no other man, knows the sacred law, who explores the utterances of the sages and the body of the laws, by modes of reasoning, not repugnant to the Veda-lore.

(GROUP C)

FIFTH PAPER

FIRST HALF

*The questions are of equal value*

*Full Marks—75*

1. अधोलिखितेषु लीङ्यधिकरणानि विषयादिनिर्देशपूर्वकमुपपाद्यन्ताम् :—

(1) दर्शपूर्णमासाधिकरणम्, (2) गुणकामाधिकरणम्, (3) असञ्जात-विरोधाधिकरणम्, (4) अवेष्टाधिकरणम्, (5) तत्सिद्धिपेटिकाधिकरणम्, (6) पदार्थप्राबल्याधिकरणम् ।

2. यथाऽभिमतं वाक्यत्रयं सावतरणं व्याख्यायताम् :—

(1) चोदनेति क्रियायाः प्रवर्तकं वचनं स्यात्, (2) स एष वाक्कैकदेश-स्याक्षेपः, (3) अतिक्रमिष्याम इममाप्नायम्, (4) पृथिवीचयनप्रतिषेधार्थं यद्वाक्यं चयनप्रतिषेधार्थमेव तत्, (5) प्राणादिभिरेनमुपलभामहे ।

3. यथाभिमतं विषयद्वयं प्रसङ्गनिरूपणपूर्वकमुपपाद्यताम् :—

(1) स्फोटवादनिरासः, (2) शब्दार्थसम्बन्धनित्यत्वम्, (3) अपूर्व-साधनम्, (4) नामधेयनिमित्तानि ।

4. यथाभिमतं द्वौ विषयौ समालोच्येताम् :—

(1) स्मृतिप्रामाण्यवस्था, स्मृतिपादार्थसंग्रहश्च ।

(2) कर्मनिर्देशप्रमाणानि च ।

(3) अङ्गत्वम्, तत्प्रमाणानि च ।

5. मीमांसायाः कथं वैधत्वम् ? कथं च तस्या धर्मशास्त्रेषु व्यवहाराभ्यायेषु बोधयोगः ?

SECOND HALF

Translate into English, either A or B :—

A

(a) यदेवान्यथा सन्तमन्यथा प्रतिपद्यते तन्निरालम्बनम्, तदेव भावा- 25.  
लम्बनं तदुक्तं भवति, सर्वं हि वस्तु सदसदात्मकम्, तच्च शुक्तिकारजतादिज्ञानं  
शुक्तिकार्यं भावं शुक्तिकारूपेण सद्रूपं भावान्तरस्य रजतस्य यत् सद्रूपं  
रजतरूपं तेन रूपेण गृह्यदभ्रान्तं भवति, नेदं रजतमिति त्वभावज्ञानं शुक्ति-  
रूपेण सन्तमेव भावं रजतस्य यदसद्रूपं तेनात्मना गृह्यदभावालम्बनमभ्रान्तं  
भवति ; तेन भ्रान्तिज्ञानमभावज्ञानं बोधयमन्यथासन्तमर्थमन्यथारूपेण  
प्रतिपद्यते, तत्र भ्रान्तिरन्यस्य सद्रूपेणाऽन्यत् प्रतिपद्यते, अभावज्ञानं त्वन्यस्या-  
सद्रूपेणाप्यत् प्रतिपद्यते इत्येव विशेषः ।

(b) किं खलु भवतो नीलपीतयोस्तिकमधुरयोः शीतोष्णयोगं वा श्वयो-  
श्वाक्षुषप्रयोगानन्तरम् उपजायमानं विज्ञानम् एकरूपमेव, सत्यमिति ब्रुवाणस्य  
नोत्तरं वाच्यम् । यत्स्वितरेतराभावो भेद इति, तदस्तु, न त्वल्ल भेदग्रहणेन  
कार्यम्, यद्धि नीलाग्निश्च पीतं तत्स्वरूपमेव गृह्यते न तु भिन्नतया, येन भेद-  
ग्रहणापेक्षा भवेत्, तेन नीलपीतादीनां भिन्नरूपाणां प्रत्यक्षग्रहणे सति  
पश्चादभावेनेतरेतराभावः प्रतीयते इति न कश्चिदोषः ।

B

तदेवं सांख्यानां मतेन प्राप्यकारित्वं समर्थितं न त्वाहङ्कारिकत्वेऽक्षाणां 25.  
तत्त्वान्तरवृत्तिसंज्ञावे वा प्रमाणमस्ति, तेन भौतिकान्येवेन्द्रियाणि प्राप्य-  
कारिणीति वक्तव्यम् । तथाहि चक्षुस्तावद् रूपप्रत्यक्षहेतुत्वादालोकावत्तैजसं  
तथा च सति दीपप्रभावादेव पृथुग्राहिकल्पनं सुकरमिति न किञ्चिदोद्यम् ।  
यथा रूपवदेव तैजसं चक्षू रूपस्य विशेषगुणस्य प्रकाशकम् । एवं गन्ध-  
स्यापि विशेषगुणस्य गन्धवदेव प्रकाशकमिति घ्राणस्य पार्थिवत्वसिद्धिः ।  
तच्च वायुप्रेरितेषु चम्पकादिसूक्ष्मद्रव्येषु घ्राणोदरप्रविष्टेषु तद्वत् गन्धं संयुक्त-  
समवायेन प्राप्यैव गृह्णातीति वाच्यं प्राप्यकारित्वम् एवं रसनमपि रसग्राहि  
रसवदेवेति स्थिते सर्वं पार्थिवमाप्यं वेति चिन्तायामाप्यत्वं युक्तम्, आर्द्र-  
जिह्वो हि स्फुटतरं रसं गृह्णाति न शुष्कजिह्वः, तेन जिह्वागतानामपामेव  
रसग्राहकत्वमिति रसनस्याऽप्यत्वम्, तथा निम्नगोक्षीर्णानाम् वायुसंपर्क-  
च्छीतस्पर्शोपलम्भात् शरीरेऽपि वायोरेव स्पर्शोपलब्धिनिमित्तमिति  
त्वगिन्द्रियस्य वायवीयत्वम्, प्राप्यकारित्वं तु त्वग्रसनयोरविवादम्, ओषं तु  
दिङ्मयम् इति शब्दाधिकरणे वक्ष्यत इत्यक्रमतिविस्तरेण ।

(GROUP 'C')

SIXTH PAPER

The figures in the margin indicate full marks  
Answer ANY FOUR of the questions

FIRST HALF

1. मीमांसाशास्त्रचरिते कुमारिखप्रभाकरयोः स्थाने विविच्य कौमारिख- 12½  
प्रभाकरमतयोर्विप्रतिपत्तिविषयांस्त्रीन् प्रदर्शयत ।

2. (A) or (B) should be answered :—

(A) अवतार्य सपरिकरं व्याकुरुत :— 12½

(1) अमेत्यपि समूहस्य द्वित्वसिद्धिः प्रयोजनम् ।

सहस्थितिः पौर्णमास्यामित्युक्तिभ्यां त्रिके सिक्ते ॥

(2) व्रतोक्या पर्युदासत्वे संकल्पोऽनीक्षणेऽप्रसः ।

नक्रत्वङ्गममानत्वात्पुमर्थः पापहानये ॥

Or,

(B) प्राप्तबाधाप्राप्तबाधयोर्भेदं विविच्य आद्यस्य प्रकारभेदान् संग्रहेण 12½  
सोदाहरणं प्रतिपादयत ।

3. (A) or (B) should be answered :—

(A) पूर्वतन्त्राध्यायानां पौर्वापर्यस्य आज्ञस्य विषयानुसारेण 12½  
समर्थयत ।

Or,

(B) “नानृतं वदेत्” “यावतोश्चान् प्रतिगृह्णीयात् तावतो वारुणां- 12½  
अनुष्कपालाश्विर्वपेत्”—अनयोर्वाक्ययोरर्थं विमृश्य पक्षभेदेन प्रयोजनभेदो-  
पन्यासपूर्वकं सैद्धान्तिकं पक्षं समर्थयत ।

4. अधोनिर्दिष्टन्यायेषु त्रयाणां मूलभूतान्यधिकरणानि प्रदर्श्य 12½  
तानुदाहरणैर्विशदयत :—

(1) आगन्तूनामन्ते निवेशः ।

(2) प्रमाणबलाबलात् प्रमेयबलाबलं ज्यायः ।

(3) नास्ति वचनस्यातिभारः ।

(4) गुणे त्वन्याय्यकल्पना ।

(5) संदंशन्यायः ।

5. अधोनिर्दिष्टेषु सोन्विषयानुदाहरणैर्युक्तिभिश्च स्फुटयत :— 12½

(1) यदि-शब्दयुक्तवाक्यस्य क्वचिन्निमित्तसमर्पकत्वम्, क्वचिन्न ।

(2) क्वचिद्बहुवचं स्त्रित्वे पर्यवस्यति, क्वचिन्न ।

(3) क्वचित्सर्वङ्गोपसंहारः, क्वचिद्यथाशक्त्यनुष्ठानम् ।

(4) अङ्गभूतमन्त्राणां क्वचिदावृत्तिः, क्वचिन्न ।



## SECOND HALF

1. परप्रकरणस्थानामङ्गे श्रुत्यादिभिस्त्रिभिः । 15

ज्ञाते पुनश्च तैरेव सन्दर्शेन तदिष्यते ॥ इति

उपक्रमनिर्देशपूर्वकमस्य मीमांसान्यायप्रकाशे समुद्धृतस्य श्लोकस्य  
सोदाहरणोपन्यासं व्याख्या क्रियताम् ।

अथवा

“प्रयाजादिवाक्यानि अर्थं समर्थं चरितार्थानि स्वरूपसंस्पर्शं सत्यपि 15  
प्रयोज्यतां न प्रतिपद्यन्ते” । इति

अस्य वार्तिकग्रन्थस्य तात्पर्यं मीमांसान्यायप्रकाशदर्शितदिशा  
विस्पष्टतया प्रतिपाद्यताम् ।

2. पाठक्रमस्य लक्षणनिर्देशपूर्वकं तदवान्तरभेदप्रदर्शनानन्तरं तत् 10  
बलाबलभावः सोदाहरणयुक्तोपन्यासेन विशदीक्रियताम् ।

अथवा

उत्पात्तिशिष्टगुणबलीयस्त्वं नामधेयत्वे पञ्चमं निमित्तमिति वादिनां 10  
मत्तं सयुक्तिकं व्यवस्थाप्यताम् ।

3. Translate any one of the following extracts :—

10

(A) “कार्यमनुष्ठेयमुच्यते । यत् पुरुषोऽनुष्ठानृत्वेन । विनियुज्यत  
इदं त्वया कर्तव्यमिदं त्वया न कर्तव्यमिति, अग्निहोत्रादिकर्तव्यं  
कलत्रभक्षणं च न कर्तव्यम् । प्रतिषेधोऽप्यनुष्ठानमेव । यद्ब्रह्मवधस्यानुष्ठानं  
तदेव प्रतिषेधस्यानुष्ठानम्, प्रवृत्तिश्च क्रियानिवृत्तिश्च क्रियेति । नहि  
परिस्पन्दमानसाधनसाध्यमेवानुष्ठानमुच्यते । किं तर्हि ? प्राप्ते तद्रूपे  
तच्चिवृत्तिरपि, यथा हितसेवी चिरायुरिति । यः प्राप्ते काले भुङ्क्ते प्राप्ते न  
भुङ्क्ते । अभोजनमपि हितमेव । अथवा कार्यशब्दः प्रदर्शनार्थो विधेः  
प्रतिषेधस्य च । एतावान् वेदस्य तत्त्वरूपपारमार्थिकोऽर्थोऽयन्तु इतिवृत्त-  
संवर्णनरूपः ‘सोऽरोदीद् यदरोदीत्तद्ब्रह्म रुद्रत्व’मिति । न स तत्त्वार्थो  
विध्यन्तरेणैकवाक्यत्वात् प्रशंसापरत्वेन स्वार्थनिष्ठत्वाभावात् । अस्ति ह्यस्य  
विध्यन्तरं तस्माद् वह्निं रजतं न देयमिति सोऽरोदीदित्यादीनि पुरास्य  
गृहे संवत्सराद् रोदनं भवतीत्यन्तानि तदेकवाक्यतापन्नानि वह्निं  
रजतदाननिन्दया तत्प्रतिषेधं स्तुवन्ति । तदुक्तं साध्येऽर्थे वेदः प्रमाणं न  
सिद्धरूपे । अर्थावादानां हि सिद्धरूपेऽर्थे, नहि तदर्थस्य कर्तव्यता प्रतीयते,  
विध्युपदेशपरत्वेन प्रतीयते । यदि च स्वार्थपरा अपि स्युस्तदा विधिपरत्वं  
व्याज्यते । एतच्च प्रतीयमानैकवाक्यताबोधनेन सम्भवत्येकवाक्यत्वे  
काचमेवोऽव्याख्या” ।

(B) “ईदृशा हि तेषां हेतवो, वैदिकी हिंसा पापहेतुर्हिंसात्वा-  
हौकिकहिंसावत् । तस्य हिंसायां पापहेतुत्वं न कुतश्चिदन्यतः प्रमाणात्  
सिद्धमन्तरेणागमम् । एवञ्चेन्नास्ति हिंसायाः पापसाधनत्वसिद्धौ हेतु-  
र्यावदागमः प्रामाण्येन नाभ्युपगतः । अभ्युपगते चागमप्रामाण्ये तद्विरुद्धो  
हेतुर्न युज्यते । सोऽयं स्ववचनविरुद्धः पक्षः नैनं तार्किका अनुमन्यन्ते ।  
मम माता वध्येतिवदागमविरुद्धश्च । अथोच्यते नैवागमः प्रमाणं कथं  
तद्विरोधोद्भावनं दूषणम्, अनृतव्याघातपुनरुक्तदोषेभ्यः । कारीर्यादि-  
कर्मणां तत्समनन्तरं फलार्थितयानुष्ठीयमानानां न नियमतोऽनुष्ठान-  
समनन्तरं फलप्राप्तिः । कालान्तरे भविष्यति इति चेदुक्तमत्र ।

“कृता शरदि कारीरी भृशं शुष्यत्सु शालिषु ।

वसन्ते जायते वृष्टिस्तस्यादौ न भवेत् फल”मिति ॥

यान्यप्यत्र भाविकफलानि ज्योतिष्टोमादीनि, तत्रापि निरन्वयविनाशात्  
कर्मणो वर्षशते फलं भविष्यतीति निःसन्दिग्धवैतानिकव्यवहारोपमेतत् ।  
तस्मादनृतम् । व्याघातः उदिते होतव्यमनुदिते जुह्वतो दोषः ।  
“प्रातःप्रातरनृतन्ते वदन्ति पुरोदयाज्जुह्वति ये ऽग्निहोत्रम्” । तथा “अनुदिते  
होतव्यं यथा अतिथये प्रद्वृताय दद्यात् तादृगेतद् यज्जुहुया”दिति एकत्रो-  
दितहोमो विधीयतेऽनुदित-होमनिन्दया । तदेव विपरीतमन्यत् । तस्यैकः  
पक्ष आश्रीयतामित्यनध्यवसायः” ।

## SEVENTH PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

*Full Marks—75*

१। अधःस्थ-क-ख-ग-घ-चिह्नितेषु वचनेषु वचनद्वयं कुल्लुकोक्तदिशा  
ख्याल्येयम् :—

- |     |  |    |
|-----|--|----|
| (क) | यत्तत्कारणमव्यक्तं नित्यं सदसदात्मकम् ।<br>तद्विसृष्टः स पुरुषो लोके ब्रह्मेति कीर्त्यते ॥   | १० |
| (ख) | उद्ववर्हात्मनश्चैव मनः सदसदात्मकम् ।<br>मनसश्चाप्यहङ्कारमभिमन्तारमीश्वरम् ॥                  | १० |
| (ग) | महान्तमेव चात्मानं सर्वाणि त्रिगुणानि च ।<br>विषयाणां ग्रहीतृणि शनैः पञ्चेन्द्रियाणि च ॥     | १० |
| (घ) | तेषान्ववयवान् सूक्ष्मान् षण्णामप्यमितौजसाम् ।<br>सन्निवेद्यात्ममासासु सर्वभूतानि निर्म्ममे ॥ | १० |

२। अधःस्थप्रश्नेषु प्रश्नस्य समामेयम् :—

(क) कामात्मता न प्रशस्ता न चैवेहास्त्यकामता । १०  
काम्यो हि वेदाधिगमः कर्मयोगश्च वैदिकः ॥

वचनस्य तात्पर्यं संस्कृतभाषया प्रदर्श्य कुल्लुकदिशा व्याख्येयम् ।

(ख) “नोद्वहेत् कपिलां कन्यां” १०  
“सपिण्डां न समुद्वहेत्”

अनयोर्विध्योः कीदृशो नजोऽर्थः विचार्य प्रदर्श्यताम् ।

(ग) पितृयज्ञन्तु निर्वर्त्य विप्रश्चन्द्रक्षयेऽग्निमान् । १०  
पिण्डान्वाहार्यकं श्राद्धं कुर्यान्मासानुमासिकम् ॥

कः पितृयज्ञः तत्र च केषामधिकारिता ? सरेखपदं व्याख्यायताम् ।  
किं नाम अन्वाहार्यम् ? विप्रपदमत्र विवक्षितमुपलक्षितं वा सर्वं समाधीय-  
ताम् ।

(घ) कुश्लधान्यको वा स्यात् कुम्भीधान्यक एव वा । १०  
स्रग्हीहिको वापि भवेदश्वस्तनिक एव वा ॥

व्याख्यायतामिदं वचनम् ।

(ङ) पुत्राः कतिविधाः किं वा तत्र प्रमाणम् ? तेषां के बन्धु- १०  
दायादाः के वा अदायादबान्धवाः सर्वं सप्रमाणं लेख्यम् ।

३। अधोलिखित-सूत्रचतुष्टयात् सूत्रद्वयं व्याख्येयम् :— १२

(१) स्त्रीभिर्यावदर्थसम्भाषी ।

(२) नियमेषु तपः शब्दः ।

(३) कर्त्तव्यमनायुष्यञ्च ।

(४) अधोऽनिर्वीतस्वेकवस्त्रः ।

४। अधोलिखित-सूत्रचतुष्टयात् सूत्रद्वयं व्याख्येयम् :— १२

(१) अर्चिते श्रेयसि चैवम् ।

(२) अभिक्रमणं वचनाददृष्टेन ।

(३) पूर्वेषु नियमस्तु ।

(४) न श्रोत्रिय-प्रव्रजित-राजपुरुषैः ।

## SECOND HALF

ANY ONE of first two and ANY TWO of the rest

Full Marks—25

१। ब्रह्मचारी वेदमधीत्यान्त्यां समिधमत्याध्यासन् । व्याख्यायतां ९  
सुहृदिदम् ।

(क) वेदमित्येकस्यसंख्याया विवक्षितत्वं न वा ? अन्यतराभिमतौ कारणं निर्द्देश्यम् । अन्यत्वात्नेन सूत्रेण वेदाध्ययनं विधीयते न वा ? सूत्रोक्तसमिदाधानस्य कः कालः ? समिच्च कीदृशी किं-प्रमाणा वा ?

अथवा

नित्यश्राद्ध-वैवस्वतवर्ण्योः कीदृक् पौर्ण्वपर्व्यं गृह्यसम्मतम् ? इत्यते १

च—

नित्यश्राद्धमकृत्वा तु वैश्वदेवं करोति यः ।

अकृतं तन्नवेच्छाद्दं पितॄणां नोपतिष्ठते ॥

तथा

नित्यश्राद्धे गयाश्राद्धे तीर्थश्राद्धे तथैव च ।

वैश्वदेवं हुनेदादौ ततः श्राद्धं प्रवर्त्तते ॥

संहितावचनयोर्विरोधः । स च कथं समाधेयः ?

२ । प्रावृतां यज्ञोपवीतिनीमभ्युदानयन् जपेत् । सोमोऽवद- ८  
द्रन्धर्व्वयेति । व्याख्यायतां सूत्रमिदम् ।

(क) यज्ञोपवीतिनीमित्यस्य यज्ञोपवीतधारिणीमिति स्वारसिकोऽर्थो-  
ऽभिमतश्चेत्तदा सत्त्वासामेव तद्धारणमायाति तच्च श्रीमतामभिमतं न वा ?  
अनभिमतौ च मुख्यार्थवाधः कथं परिहरणीयः ?

अथवा

तयः पौर्णमासीकाला भवन्ति सन्ध्या वास्तमितोदिता वोच्चैर्वा । ८  
काऽस्य व्याख्या ? उभयदिनव्यापित्वे पौर्णमास्याः कदा यागानुष्ठानम् ?  
चन्द्रमसः पूर्णमण्डलतयावगतेरुपायत्वेन सूत्रमधिगतञ्चेत्तद्वृद्धिस्तु विशदी-  
क्रियताम् ।

३ । कामं गृह्येऽग्नौ पत्नी जुहुयात् सार्धंप्रातर्होमौ । गृहाः पत्नी गृह्य ८  
एषोऽग्निर्भवति ।

व्याख्याय समाधीयतां पत्न्याः स्वातन्त्र्येण होमाधिकारः अपि  
जानासि गृह्यपदस्य का समाख्या ?

अथवा

जायायाः पाणिं ग्रहीष्यन् । ८

सूत्रेऽस्मिन् पाणिग्रहणादवर्वाक् रमण्यां जायापदनिर्द्देशः कथं  
समाधीयते ? जायापदस्य का वा व्युत्पत्तिर्भाष्यसम्मता ?

## EIGHTH PAPER

*The questions are of equal value*

## FIRST HALF

*Full Marks—75**Answer THREE questions only*

1. Write a clear note on Kāladharma. Expand the idea दानमेव कलौ युगे. What is the definition of *patita* and how should you deal with him in the Kali age?

2. What are the *Ṣaṭkarmas*? How should each of them be observed and with what purpose?

3. Explain the term *Vyavahāra*. How does an occasion for *Vyavahāra* arise? What is the general procedure to be followed regarding the first and second *pāda* of a *Vyavahāra*?

4. Define दाय. What are its twofold divisions? 'किं विभागात् स्वत्वम्, उत स्वस्य स्वतो विभागः'. Answer this question, mentioning the *pūrtapakṣa*, if any.

5. Fully discuss the principle underlying the line 'आगमोऽभ्यधिको भोगाद् विना पूर्वक्रमागतात्,' laying special stress on the significance of पूर्वक्रमागत-भोगः ।

6. Write a thesis on *ṛṇādāna*.

7. Annotate any three of the following :—

- (a) अभियोगमनिस्तीर्य नैनं प्रत्यभियोजयेत् ।  
अभियुक्तञ्च नान्येन नोक्तं विप्रकृतिं नयेत् ॥
- (b) निहृते लिखितं नैकमेकदेशे विभावितः ।  
दाप्यः सर्वं नृपेणार्थं न ग्राह्यस्त्वनिवेदितः ॥
- (c) गृहीतमूल्यं यः पण्यं क्रेतुनैव प्रयच्छति ।  
सोदयं तस्य दाप्योऽसौ दिग्ग्लानं वा दिगागते ॥
- (d) सिरासं दशरासं वा शावमाशौचमिष्यते ।  
ऊनद्विवर्षं उभयोः सूतकं मातुरेव हि ॥
- (e) सन्दिग्ध-लेख्यशुद्धिः स्यात् स्वहस्तलिखितादिभिः ।  
युक्तिप्राप्तिक्रियाचिह्न-सम्बन्धागम-हेतुभिः ॥

## SECOND HALF

*Full marks—25*

Translate into Sanskrit :—

The Taittirīya Saṃhitā declares that all Manu said was medicine, Yaska cites him—not our text—for the law of succession, the *Gr̥hyasūtras*, the *Dharmasūtras*, the epic repeatedly assert that Manu said so and so.

Only in part do these assertions agree with the Manusmṛti; even Aśvaghoṣa's citations of a Mānava Dharma agree only twice with that text. An investigation of the epic reveals that, without any citation of Manu, there are especially in Books III, XII, and XVI, 260 verses, say a tenth of the Smṛti, in substance and largely even in form identical with verses of the Smṛti. While we may readily believe that the kernel in some degree of the Smṛti was formed by an older Dharmaśūtra, and while it is natural to see in this the Mānava Dharmaśūtra of a branch of the Maitrāyaṇīya school of the Black Yajurveda, it must be admitted that no strict proof is possible. The Vāsiṣṭha Dharmaśāstra cites from the Mānava a long passage in prose and verse which agrees in part with the Smṛti and some minor detailed similarities can be traced between the Smṛti and the extant Gṛhyasūtra of the Mānavas.

### FIFTH PAPER

#### FIRST HALF

Full Marks—50

*The questions are of equal value*

*Answer ANY THREE*

1. परिभाषामते किं तावत् निर्विकल्पप्रत्यक्षलक्षणम् ? नैयायिकोक्त-निर्विकल्पलक्षणस्वीकारे वेदान्तोक्तप्रत्यक्षविषेर्न्याहतिः स्यान्न वा ? सोपपत्तिकं समाधेयम् ।

2. यदि अज्ञाननिवृत्त्या प्रत्यक्षसिद्धिर्भवेत्, भवेत् ज्ञानस्य परप्रकाश्यत्वं ज्ञाननिवर्त्यत्वरूपाज्ञानलक्षणं च सिद्धं न स्यात् । यदि ज्ञानेनैवाज्ञाननिवृत्तिः, प्रागेव सिद्धं स्यात् प्रत्यक्षम्, परिभाषोक्तप्रक्रिया च निरर्थिका स्यात् । कथमस्य समाधिः ?

3. यदि घटपटादिकं प्रागेव सिद्धं न स्यात्, न स्यात् प्रत्यक्षस्थले अन्तःकरणस्य तदाकारपरिग्रहः ; यदि प्रागेव सिद्धं स्यात्, स्यादेव तेषां निरपेक्ष-सिद्धिः अद्वैतहानिश्च, कथमस्य समाधिः ?

4. वेदान्तोक्तानुमानप्रक्रिया प्रदर्शनीया, न्यायमतात् प्राधान्येन अस्याः के वा भेदाः ? कथं वा जगन्निष्पत्त्यात्मनुमितं स्यात् ?

5. विनाज्ञाननिवृत्त्या न भवेत् प्रत्यक्षसिद्धिः, अज्ञाननिवृत्त्या च यदि मोक्षः न कथं प्रत्यक्षेण मोक्षसिद्धिर्भवेत्, अपरोक्षश्च मोक्षः श्रूयते । कीदृश्याविद्यानिवृत्त्या च मोक्षः, यदि अविद्यानिवृत्त्या मोक्षः न कथं तस्य परापेक्षत्वम् कार्यत्वे च अनित्यः स्यात् । कथमस्य समाधिः ?

## SECOND HALF

Full Marks—50

*The figures in the margin indicate full marks**Attempt ANY THREE questions of which the LAST must be one*

1. What do you know of *ekajivavāda* and its different varieties? Do you think it to be consistent with the position of *Sūtrakāra* and *Bhāṣyakāra*? Give reasons for the position you take up. 12½

2. Give a comparative estimation of the theories bearing on the nature of *Jiva* and *Īśvara*, particularly from the point of view of the authors of *Vivaraṇa*, *Saṅkṣepasāriraka*, and *Prakāṣārtha*. 12½

3. Give an exposition of the philosophical position of *Sāṅkhya*, *Yoga*, *Sūnyavāda*, and *Vijñānavāda* and show their limitations in the light of the criticism of the *Pañcadaśī*, and how *Vedānta* succeeds in overcoming them. 12½

4. Give the *raison d'être* of the classification of *ānanda* in the *Pañcadaśī*, and show by an analysis of the psychology of any pleasurable experience that the element of joy is an internal manifestation and not derived from external data. 12½

5. Translate any one of the following extracts into English :—

25

(A) पूर्वं मनुष्यानाधिकृत्य शास्त्रस्य प्रवृत्तवान् मनुष्याणां ब्रह्मोपासनेऽधिकार इत्युक्तम् । तत्प्रसङ्गेन देवादीनां ब्रह्मविद्यायामधिकारोऽस्ति न वेति संशयो बुद्ध्यालुढो भवति । तत्राप्यं पूर्वं पक्षः । नास्ति ब्रह्मविद्यायां देवादीनामधिकारः । कुतः ? तेषां विग्रहादिप्रतिपादकवचनाश्रवणात् । मन्त्रार्थवादादीनामपि “वायुर्वै श्रेष्ठिष्ठा देवता” इत्यादीनां “वायव्यं श्रेष्ठमात्मैत भूतिकात्मः” इत्यादिविधिवैक्यैकवाक्यतया शेषभूतानां वायुस्तुतिमात्रपराणां वाय्वादिवैक्यविग्रहादिसम्भावप्रकाशकत्वाश्रवणात् । करणकलेवरमन्तरेण च ब्रह्मानुष्ठानलक्षणोपासनादिसामर्थ्यं न स्यात् । तदतिरेकेण चार्थित्वस्याप्यसम्भवात् सामर्थ्यार्थित्वयोरभावादेव देवादीनां तत्ताधिकारो नास्तीति प्राप्तेऽभिधीयते ।

(B) अयं भावः । “औत्पत्तिकस्तु शब्दस्यार्थेन सम्बन्धस्तस्य ज्ञानम्” इत्यादिसूत्रे “औत्पत्तिक इति नित्यं ब्रूमः” इति शबरस्वामिन आहुः । तथा च शब्दस्यार्थेन सम्बन्धो नित्य एवेति मतम् । सम्बन्धस्य द्विष्टत्वेन सम्बन्धधीनमेव तस्य नित्यत्वं वाच्यम् । तथा च शब्दस्य तद्वाच्यस्य च प्राङ्नित्यत्वं स्थिरीकृत्यैव अन्वयस्य तत्त्वं परिरक्षणीयं भवेत्, नेतरथा । तदिदानीं देवादीनां विग्रहवत्त्वेन सावयवत्वादिन्द्रादिरूपार्थस्य घटादिवदवर्जनीयत्वं स्यात् । तथा सति अनित्येनार्थेन नित्यस्य तद्वाचकरूपस्य शब्दस्य सम्बन्धमशक्यत्वादान्नायशब्दे अन्वये च नित्यतया यत्प्रामाण्यं व्यवस्थितं तस्य विरोधः सुतरामापद्येत इति ।

## SIXTH PAPER

## FIRST HALF

Full Marks—75

The questions are of equal value

यथेच्छं प्रश्नपञ्चकं समाधेयम् :

1. अध्यासकक्षणं निरुच्य तस्य प्रथमसूत्रे को वोपयोग इति विविच्यताम् ।
2. जन्माधिकरणं शास्त्रयोनित्वाधिकरणं च कथं निर्गुणब्रह्मप्रतिपत्तिसाधनम् ?
3. अधोलिखितेष्वधिकरणेषु स्त्रीणि सम्यगुपपाद्यन्ताम् :—  
 (1) आनन्दमयाधिकरणम् । (2) इन्द्रप्रतर्दनाधिकरणम् ।  
 (3) तदनन्यत्वाधिकरणम् । (4) दहराधिकरणम् ।  
 (5) विदुषामुत्क्रान्तिनिषेधाधिकरणम् ।
4. देवताधिकरणापभ्रूद्वाधिकरणयोर्ब्रह्ममीमांसायां का वा सङ्गतिः ? किं च प्रयोजनम् ?
5. अविद्याध्यासमवलम्ब्य स्त्रीणि दर्शनानि परीक्ष्यन्ताम् ।
6. स्वान्तिकमायिकत्वम्, मुक्तात्मस्वरूपं च सूत्रभाष्यावलम्बनेन परीक्ष्यताम् ।
7. अद्वैतवादः कार्यकारणभावश्च कथं न विरुद्धः ?
8. अद्वैतानुकूलानि तत्पतिकूलानि च स्त्रीणि स्त्रीणि वाक्यानि सूत्राणि च संगृह्य परीक्ष्यताम् ।

## SECOND HALF

Full Marks—25

1. Translate into Sanskrit *any one* of the following passages :—

25

(a) Among ancient philosophers, it is in the Charvaka school that we find the most complete negation of immortality. He attacks the theories of pre-existence and survival, and advances elaborate arguments. The soul, he says, comes to life with the body, grows with the body, and dies with it. In old age, judgment falters, speech and thought both wander. In bodily sickness, the mind does not follow its usual course. The soul itself may be diseased and may be cured by medical art. How can this slave of the body continue to exist once it is separated from the body? How could it continue to feel without its five senses? If the body is cut in two, the soul will also be divided, and a thing that is divisible cannot claim to be eternal.

(b) In opposition to the above doctrine of the materiality and mortality of the soul, the spiritual doctrine of the soul was established by means of the following among other arguments. The soul is spiritual, because it is the subject of thought. It is impossible to regard thought as an attribute to that which does not think. The soul perceives directly in itself only spiritual functions, such as thought, emotion, and volition. If it were corporeal, it would perceive immediately in itself something corporeal. The soul is finally characterized and distinguished by the faculty of reflection. A body has only one figure, one form; it cannot become the figure and the form of another body.



## SEVENTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Full Marks—75*

अधोलिखितेषु प्रश्नेषु त्वयं समाधेयम्

1. सत्यपि चक्षुरादिकारणसाम्ये सविकल्पक-निर्विकल्पकप्रत्यक्षयो- 25  
र्विषयवैषम्यं कया युक्त्या समर्थितं रामानुजेन ?
2. सजातीय-विजातीय-स्वगतभेदस्य शून्यत्वमात्मनः कस्य सम्मतम् ? 25  
तच्च रामानुजेन कया युक्त्या खण्डितम् ?
3. स्फोटवादनिरासोपायः कीदृशः ? 25  
स्फोटवादनिरासो वा कथं कृतो रामानुजेन ?
4. मुक्तात्मनः शुद्धत्वेऽपि शुभाश्रयता कया युक्त्या प्रतिषिद्धा 25  
रामानुजेन ?
5. अन्यथाख्यातिवादनिरासपूर्वकं सत्ख्यातिवादं युक्त्या समर्थय । 25
6. रामानुजनये ब्रह्मस्वरूपं कीदृशम् ? तादृशस्वरूपस्वीकारे च का 25  
युक्तिः ? तस्य वा कीदृशी प्रमाणगम्यता ?

## SECOND HALF

*Full Marks—25*

प्रथमद्वितीययोरेकतरमुत्तरयतावशिष्टयोः द्वयोरेकतरस्योत्तरं कार्यम्

1. नास्तिकास्तिकयोः परस्परभेदकलक्षणं कीदृशम् ? तयोश्च कस्य 15  
के विभागाः ?
2. सर्वेषां दार्शनिकानां कस्मिन्नपि विषये ऐकमत्यं वर्तते चेत् 15  
स विषयः प्रकाश्यताम् ।
3. युक्त्या विशानवादं संस्थाप्य तत्खण्डनरीतिः प्रदर्श्यताम् । 10
4. विषयमात्रस्य सुखदुःखादिरूपत्वखण्डनायाद्वैतब्रह्मसिद्धिकृता केनो- 10  
पष्टम्भेन का युक्तिः प्रदर्शिता ?

## EIGHTH PAPER

## FIRST HALF

Full Marks—50

*The questions are of equal value*

1. State what constitutes the specific message of the Gītā which may be regarded as the essential lesson of the poem.

Give some of the senses in which the term *Karma* has been used in the Gītā. When we think of 'Karma-yoga' as taught in the Gītā, what meaning does the term usually signify?

2. Discuss the propriety of selecting the battle-field for imparting the teaching which the Gītā imparts.

Or,

Explain—

“अप्रसिद्धे हि आत्मनि स्वार्थाः सर्वाः प्रवृत्तयः व्यर्थाः प्रसज्येरन् । न च सुखार्थं सुखं दुःखार्थं वा दुःखम् ।”

3. Annotate any three of the stanzas :—

- (a) श्रेयान् स्वधर्मो विगुणः परधर्मात् स्वनुष्ठितात् ।  
स्वधर्मे निधनं श्रेयः, परधर्मो भयावहः ॥
- (b) अव्यक्तात् व्यक्तयः सर्वाः प्रभवन्त्यहरागमे ।  
रात्रागमे प्रकीयन्ते तसैवाव्यक्तसंज्ञके ॥
- (c) कार्यकारणकर्तृत्वे हेतुः प्रकृतिरुच्यते ।  
पुरुषः सुख-दुःखानां भोक्तृत्वे हेतुरुच्यते ॥
- (d) नान्यं गुणैर्मयः कर्तारं यदा द्रष्टानुपश्यति ।  
गुणैर्मयश्च परं वेत्ति मन्त्रावं सोऽधिगच्छति ॥

4. Fully explain :—

“तच्च ब्रह्म परोक्षमिहितम्, प्रत्यक्षतो विशेषेण निर्दिशति—‘अयमात्मा ब्रह्मेति’ ।”—अयमिति चतुष्पात्त्वेन प्रविभज्यमानं प्रत्यगात्मतया निर्दिशति ‘अयमात्मेति’ ।

Also show that the purpose of the identification of Brahman as the source of the universe with one's own self is to bring home to the mind the undoubted reality of the postulated source of the universe; because one knows one's self to be real even without being taught.

How are the four Pādas of Brahman described?

5. Give the substance of the dialogues between Uddālaka and his son Svetaketu, as described in the VIth Chapter of the Chāndogya Upaniṣad.

N.B.—The substance of any two of the dialogues is to be given.

## SECOND HALF

Full Marks—50

*The figures in the margin indicate full marks*

1. अष्टो द्रष्टा, अश्रुतः श्रोता, अमतो मन्ता, अविज्ञातो विज्ञाता,—  
नान्योऽतोऽस्ति द्रष्टा, नान्योऽतोऽस्ति श्रोता, नान्योऽतोऽस्ति मन्ता,  
नान्योऽतोऽस्ति विज्ञाता—एष त आत्माऽन्तर्याम्यमृतः— अतोऽन्यदार्त्तम्—  
ततो होद्वालक आरुणिरुपरराम ।

Fully elaborate the doctrine enunciated in the above quotation.

12

Or,

Fully explain the expected answer to :—

वेद्य देवयानस्य वा पथः प्रतिपादं पितृयाणस्य वा, यत्कृत्वा देवयानं  
वा पन्थानं प्रतिपद्यन्ते पितृयाणं वाऽपि ।

2. एष सर्वेषु भूतेषु गृहोऽस्मा न प्रकाशते ।

इक्ष्यते त्वग्रया बुद्ध्या सूक्ष्मया सूक्ष्मदर्शिभिः ॥

Fully explain the suggested mode of self-realization.

13

Or,

Explain fully :—

तस्मिन् परमार्थसत्ये ब्रह्मणि लोका गन्धर्वनगरमरीच्युदक-माया-समाः  
परमार्थदर्शनाभावगम्यमानाः श्रिताः समस्ता उत्पत्तिस्थितिच्छयेषु ।

3. Translate into English two of the following :—

25

(a) “सांख्ये हि प्रकृतिपुरुषपर्यन्तता निरीश्वरता च श्रुतिविरुद्धा ।  
शेखरसांख्ये च तदैश्वर्यस्य प्रधानाधीनता केवलनिमित्तता । तथैव  
योगोऽपि । तदननुसन्धाय तत्त प्रवृत्तानां जीवन्मुक्ताभवनोत्तरमपि पातः ।  
तयोर्भगवन्निष्ठताया अज्ञानात् । ... एवं पाशुपतेऽपि साधनादिकं  
पशुपतेः परत्वञ्च श्रुतिविरुद्धम् । ... अतः तावन्मात्रपरतायां  
पूर्ववत् पातः । भगवदङ्गनादरणात् । ‘त्वामेवान्ये शिवोक्तेन मार्गेण  
शिवरूपिणम् । ब्रह्माचार्यविभेदेन भगवन् समुपासते ॥’ इत्युक्तरीत्या  
भगवत्परत्वज्ञाने तु क्रमान्मुक्तिः । ... एवं पञ्चरात्रेऽपि यो  
विरुद्धाश्चस्तदननुसन्धाने विमोहकत्वाच्च मुक्तिः ।

(b) यदि उत्पत्त्यश्रवणात् परस्यैव ब्रह्मणः प्रवेशश्रवणात्  
तादात्म्योपदेशाच्च परमेव ब्रह्म जीव इति मतम्, तत्तु न युक्तम् ।  
उत्पत्त्यश्रवणस्य जीवन्तित्यायामप्युपपत्तस्तस्य ब्रह्मत्वागमकत्वात् ।  
... न च भेदे अद्वैतप्रतिज्ञाविरोधाच्चित्यत्वमेवाभेदे पर्यवस्यति,  
अनादित्वञ्च मिथ्यात्वे । अतो न हेतौ दोष इति वाच्यम् ।

प्रतिज्ञाया अंशांशिभावेन, 'पराऽस्य शक्तिर्विविधैव श्रूयते' इत्यादि-  
श्रुतेः शक्तिशक्तिमद्भावेन च अविरोधे, नित्यत्वानादित्वयोरुक्तपथ्यवसानस्यैव  
दुर्घटत्वात् । न च अंशांशिभावे निष्कलश्रुतिविरोधः । विरुद्धधर्माश्रय-  
त्वाङ्गीकारेणैव परिहृतत्वात् । नापि निर्गुणश्रुतिविरोधः । तस्याः प्राकृत-  
गुणनिषेधपरत्वात् ।

(c) असच्छब्दो ब्रह्मवाची—देवानां पूर्व्वे युगे असतः सवजायत  
इति—ब्रह्म वा असद्वा प्राणः, प्राणो वाव महान् सह आसीत्तेजोऽब्रह्म  
इत्याचक्षत—इति पैङ्गिश्रुतिः ।

त्वं देवशक्त्यां गुणकर्मयोनौ  
रेतस्त्वजायां कविरादधेऽजः ।  
ततो वयं सत्प्रमुखा यदर्थं  
वभूविमात्मन् करवाम किं नु ॥

इति भागवते । अजायमानो बहुधा विजायत इति च ।

... अविकारोऽपि भगवान् सर्व्वशक्तित्वहेतुतः ।

विकारहेतुकं सर्व्वं कुरुते निर्विकारवान् ।

शक्तिशक्तिमतोश्चापि न विभेदः कथञ्चन । इति ।

(GROUP E)

FIFTH PAPER

*The figures in the margin indicate full marks*

FIRST HALF

*Full Marks—50*

1. "यत्नोभयोः समो दोषः परिहारोऽपि तादृशः । 20  
नैकस्तत्त्वानुयोक्तव्यस्तादृगर्थविचारणे ॥"

श्लोकोऽयमनिरुद्धवृत्तौ कुल कथमुपन्यस्त इति विशेषतः  
प्रतिपाद्यताम् । एवमनिरुद्धवृत्तितः स्थळान्तरप्रदर्शनेनाप्येतच्च श्लोकार्थस्य  
समर्थनं कर्त्तव्यम् ।

2. सांख्यमते मोक्षान्धकारयोः वृत्तिकारमते कुल अन्तर्भावः ? 15

अथवा,

वृत्तिप्रदर्शितयुक्त्यादिभिर्बिज्ञानवादिमतखण्डनपूर्व्वकं वाह्योऽर्थः  
साधनीयः ।

3. निम्नलिखितसूत्रेषु यथाकामं चतुर्णां प्रकृतोपयोगित्वव्यापकं 15  
वृत्त्यनुसारिव्याख्यानं लिख्यताम् :—

- (१) नानादिविषयोपरागनिमित्तोऽप्यस्य ।
- (२) उभयपक्षसमानक्षेमत्वादयमपि ।
- (३) इदानीमिव सर्वत्र नात्यन्तोच्छेदः ।
- (४) क्रमशोऽक्रमशश्चेन्द्रियवृत्तिः ।
- (५) अवान्तरभेदाः पूर्ववत् ।
- (६) तद्विस्मरणेऽपि भेकीवत् ।
- (७) न कार्ये नियमः उभयथा दर्शनात् ।
- (८) जड़व्यावृत्तो जड़ं प्रकाशयति चिद्रूपः ॥

### SECOND HALF

Full Marks – 50

1. (a) How does super-sensuous objects come to one's comprehension? 12½  
Describe the nature of *āptāgama* as is necessary for the apprehension of a world that lies beyond the range of one's sense-born experience.

(b) Ascertain the categories of thought recognized by the Sāṃkhya system.

2. (a) Explain the following *Kārikā* according to the *Bhāṣya* :— 12½

सिगुणमविवेकि-विषयः सामान्यमचेतनं प्रसवधर्मि ।

व्यक्तं तथा प्रधानं तद्विपरीतस्तथा च पुमान् ॥

(b) Explain the Sāṃkhya theory of liberation from *saṃsāra*.

Or,

Elucidate the following :—

12½

‘यद्येक एव आत्मा स्यात्तत एकस्य जन्मनि सर्व एव जायेरन् एकस्य मरणे सर्वेऽपि म्रियेरन् ..... न चैवं भवति । तस्माज्जन्ममरणकरणानां प्रति-नियमात् पुरुषबहुत्वं सिद्धम्’ ।

How does the Vedānta maintain its strict non-dualism on the face of such multiplicity of souls ?

3. Translate the following extracts into English :—

25

(a) तस्य संशयोऽज्ञानम् । यथा कस्यचित् स्थाणुदर्शने स्थाणुरथ पुरुषो वेति संशयः । अशक्तित्वात्—तमेव स्थाणुं सम्यग् दृष्ट्वा संशयं हेतुं न शक्नोतीत्यशक्तिः ।

(b) अन्धेन पंगुः स्कन्धमारोपितः । एवं शरीरारूढपंगु-श्रितेन मार्गेणान्धो याति पंगुश्चान्धस्कन्धारूढः । एवं पुरुषे दर्शनशक्ति-रहित पंगुवच्च क्रियाप्रधाने क्रियाशक्तिरस्यन्धवच्च दर्शनशक्तिः ।

(c) पञ्चविंशतितत्त्वज्ञो यस्तत्साम्रमे वसेत् ।

जटी मुण्डी शिखी वापि मुच्यते नास्ति संशयः ॥

दुःखत्रयाभिघाताजिज्ञासेति । तच्च दुःखसयम्—आध्यात्मिकम् आधिभौतिकम् आधिदैविकं चेति । तत्राध्यात्मिकं द्विविधम्—शारीरं मानसं चेति । शारीरं वातपित्तइलेष्मविपर्ययकृतं ज्वरातिसारादि । मानसं प्रियवियोगाप्रियसंयोगादि ।

(d) अत्र सांख्याचार्या आहुः—निर्गुणत्वादीश्वरस्य कथं सगुणतः प्रजाः जायेरन् कथं वा पुरुषास्निर्गुणादेव ? तस्मात् प्रकृतैर्युज्यते, यथा शुक्लेभ्यस्तन्तुभ्यः शुक्ल एव पटो भवति कृष्णेभ्यः कृष्ण एवेति । एवं सिगुणात् प्रधानात् तयो लोकास्निगुणाः समुत्पन्ना इति गम्यते ।

### SIXTH PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Full Marks—50*

1. What is the value of Sāṃkhya in the scheme of Hindu philosophical thought? 12

*Or,*

What is the conception of mukti according to Sāṃkhya, and how is it exactly attained?

2. What is there to differentiate one soul from another according to Sāṃkhya? Is a विशेषपदार्थ acknowledged in this connection? How and why in संसार are different souls differently affected? 18

*Or,*

Why should Prakṛti at all lose her balance in the very beginning? Contrast, in this connection, the views of Kapila and Patañjali.

3. Is Prakṛti conceived as one or many according to Sāṃkhya? Explain the view-points of Bhikṣu and others on this point. 12

*Or,*

Fully investigate the process of आपूरण in the Sāṃkhya scheme of evolution.

4. What is the conception of गुण in Sāṃkhya? 8

*Or,*

What sort of परमाणुवाद is acknowledged in Sāṃkhya according to Bhikṣu?

### SECOND HALF

*Full Marks—50*

THREE questions are to be attempted, of which the FIRST must be one.

1. Translate into Sanskrit any two of the following extracts :— 25

(a) Life we are permitted to enjoy, we may drink deep of the pleasures of love, but we must not seek to fight against the overmastering

power of fate. Had, indeed, fate been outside of us, had it been an alien power, the Indian might have seen that man's duty permitted him to defy it in pursuit of his own ideals, but fate is nothing else than the destiny which has been decreed for one by deeds of past lives through time without beginning.

(b) In daily life, we assume as certain many things which, on a closer scrutiny, are found to be so full of apparent contradictions that only a great amount of thought enables us to know what it is that we really may believe. In the search for certainty, it is natural to begin with our present experiences, and in some sense, no doubt knowledge is to be derived from them. But any statement as to what it is that our immediate experiences make us know is very likely to be wrong.

(c) It is possible that life is one long dream, and that the outer world has only that degree of reality that the objects of dreams have; but although such a view does not seem inconsistent with known facts, there is no reason to prefer it to the common sense view, according to which other people and things do really exist. Thus coherence as the definition of truth fails because there is no proof that there can be only one coherent system.

2. Define सत्कार्यवादः and explain its essential difference with अनिवर्चनीयवादः. If अभिव्यक्तिः is a necessary condition of all कार्यः, why should they be not considered असत् before or after the अभिव्यक्त state? 12½
3. Describe the steps through which a soul must pass before attaining liberation. Is a soul ever really in bondage according to the Sāṃkhya? What is चित्तवृत्तिः, of which Vācaspati Miśra speaks in connection with the proofs? 12½
4. Determine the characteristics of बुद्धिः and state how it affects a soul. The different views of Vācaspati Miśra and Viṣṇu Bhaṭṭa should be discussed on this point. 12½
5. Determine the senses of any five of the following technical terms :— 12½

प्रमा ; पारम् ; तारम् . अम्भः ; प्रमोदः ; मोहः ; तामिष्ठः ;  
अविद्या ।

### SEVENTH PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Full Marks—50*

*Only FOUR questions to be answered but no group should be left out*

#### GROUP A

1. पूर्वपरान्तफलं संयमं विवेकेन प्रदर्श्य कायस्याशुचितानिदान-मुपदर्श्य द्रष्टृदृश्योपरकं चित्तं सर्वार्थम्, क्लेशकर्माशयैरपरामृष्टः पुरुषविशेष ईश्वरः । तत्त निरतिशयं सार्वज्ञबीजम् । इति सूत्राणि यथाभाष्यं सम्यग् व्याख्येयानि । 15
2. परिणामरक्षणतद्विभागतत्समन्वयाच्च सोदाहरणं संप्रदर्शयत । 15
3. योगभाष्यरीत्या वर्णाश्रितिरिक्तशब्दस्वीकारवाचो युक्तिं निरूपयत । 15

4. योगान्तराद्यान् नामतो निर्दिश्य तदर्थोच्चासङ्कीर्णं प्रदर्श्य तद्वाचन 15  
 उपायो योगशास्त्रोक्तः प्रतिपादनीयः। सिद्धेर्योगपरिपन्थितया योगशास्त्रे  
 नैकविधसिद्धिप्रतिपादनबीजं च संप्रदर्श्यम्।
5. कर्मण एकानेकजन्मप्रदातृत्ववादो यथाभाष्यं विचारणीयः। 15

## GROUP B

6. वेदान्तिसम्मतमायायाः योगाभिमतप्रकृतेश्चाभेदो न वा ? किमस्य 15  
 भिन्नमतम् ? कथं च तेनापरमतनिरासः ?
7. वृत्तावात्मनि च प्रतिबिम्बस्य समानरूपता न वा ? अस्य भिन्नमतं 15  
 सविस्तरं निरूपणीयम्, उभयस्वीकारावश्यकत्वप्रदर्शनपूर्वम्।
8. अवच्छेदेवादं प्रतिबिम्बवादं च सम्यक् समर्थ्य योग- 15  
 रीत्याऽत्मनानात्ववादो भिन्नमतमनुसृत्य प्रदर्शनीयः परपक्षनिरासपूर्वम्।

## SECOND HALF

Full Marks—50

1. Explain the function of पुरुष and चित्त involved in the perception 7  
 of the external objects according to Bhoja and Viññānabhikṣu. Does the  
 consciousness of the objects of perception belong to, or reside in, the  
 पुरुष or चित्त ?
2. How does Īśvara, according to Patañjali, differ from the liberated 6  
 souls?
3. Explain the doctrine of Proofs as developed by the योगदर्शन of 6  
 Patañjali.
4. Explain the following two सूत्र after the manner of भोजः— 6  
 (a) चित्तेरप्रतिसंक्रमायास्तदाकारापत्तौ स्वबुद्धिसंवेदनम्।  
 (b) द्रष्टृ-दृश्योपरक्तं चित्तं सर्वार्थम्।
5. Translate into English :—

मनसः कर्तृत्वे सर्वेन्द्रियाणां स्वस्वविषयैर्युगपत् सम्बन्धे युगपद्-  
 ज्ञानोदयप्रसङ्गः। कर्तुर्मनसः सर्वेन्द्रियैरधिष्ठितत्वेन युगपत्-सन्निहितत्वात्  
 अपेक्षणीयान्तरानभ्युपगमाच्च ; न चैवं दृश्यते, तस्मात् मनसोऽन्यः कर्त्ता,  
 मनस्तु विज्ञानक्रमहेतुः साधारणं करणमेव। न च क्षणिकविज्ञानस्यैवात्मत्व-  
 मध्यस्तितुं शक्यं ज्ञानेच्छाप्रयत्नस्कारश्रुतीनाम् एकाश्रयत्वनियमात्, तेषाञ्च  
 क्रमिकत्वात् क्षणिकविज्ञानाश्रयत्वानुपपत्तेः। ज्ञानादीनामेकाश्रयत्वाभावे  
 तु, वस्तुनि दृष्टे पूर्वदृष्टसजातीयत्वादिलिङ्गवशात् दृष्टसाधनत्वाद्यनुमानपूर्वक-  
 प्रवृत्त्याद्यभावः प्रसज्येत। अन्यदृष्टे अन्यस्मरणानुपपत्तेः क्षणिकपक्षे  
 बन्धमोक्षयोरपि वैयधिकरण्यमित्यादिबहुदृष्टत्वादानादरणीयः क्षणिक-  
 विज्ञानात्मपक्षः।



## EIGHTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Full Marks—50*

प्रथमसुत्तीर्थं शिष्टानां द्वयसुत्तीर्थम्

1. चार्वाकस्य प्रत्यक्षादीनां ज्ञानोपायत्वं कया रीत्या निराकृतम् ? कया युक्त्या वा 18  
कास्य तदुपायत्वं व्यवस्थापितम् ? अस्मिन् विषये तदुपदर्शिताया अनवस्थायाश्च किं  
स्वरूपम् ? सर्वमेतत् तदीयप्रक्रियानुसारेण विशदं निरूप्यताम् ।

2. “न च तत्र स्वरूपसत्तानिबन्धनः सद्भावहारः, प्रयोजकगौरवापत्तेः अनुगतत्वा- 16  
ननुगतत्व-विकल्पपराङ्मतेः सर्वप-मङ्गीधरादिषु विलम्बेषु चक्षेऽनुगतम्याकारस्य मण्डिषु  
सूचकभूतगणेषु गुणवशाप्रतिभासनाच्च” इति ।

प्रक्रान्तमर्थमुपन्यस्य सन्दर्भोऽयं तथा व्याख्यायताम् येन प्रस्तुतोऽर्थः सम्यक् स्फुटो  
भवेत् । कौट्टशमत्र प्रयोजकम्, कथं वा तद्वीरवम् ? कौट्टशश्चात्र अनुगतत्वाननुगतत्व-  
विकल्पः ? सद्भावहारश्चात्र कौट्टशोऽभिमतः ? सर्वमेतत् सुष्ठु निरूप्यताम् ।

3. रामानुजोपदर्शितमज्ञानानुमानं तत्प्रतिप्रयोगश्च यथायथमुपन्यस्य तद्वटक- 16  
पदानां सार्थक्यमुपपाद्यताम् । रामानुजाभिमतम् अज्ञानं किंस्वरूपम्, किमाश्रयश्च, तदपि  
ग्रमाणतो निवेद्यताम् ।

4. “धर्मस्य तदतद्रूप-विकल्पानुपपत्तिः । 16

धर्मिणस्तद्विशिष्टत्वभङ्गो नित्यसमो हि सः ॥” इति

ज्ञोकोऽयं कं प्रति केन किमर्थमुपन्यक्तः ? कौट्टशस्यार्थः ? तदतद्रूपविकल्प-  
श्चात्र कौट्टशः ? कुत्र कौट्टशो वा तदनुपपत्तिः ? किं वा तथा प्रसाध्यते ?  
‘तद्विशिष्टत्वभङ्ग’पदेन ‘नित्यसम’पदेन चात्र कोऽर्थः परावृत्त्यते ?

5. जैमिनिना किमिति प्रमाणानां स्वतः प्रामाण्यमङ्गीकृतम् ? कौट्टशश्च तत् ? 16  
तदनङ्गीकारे वा का हानिरुत्प्रेत्यते ? परतः प्रामाण्ये च के के दोषा उत्प्रेक्षितास्तेन ?  
सर्वमेतत् जैमिनीयरीत्येवोपपाद्यताम् ।

## SECOND HALF

*Full Marks—50**Attempt ANY THREE questions of which the LAST must be one*

1. Give a brief description of the evil consequences of Fortune and 12½  
Long Life as depicted in the Yogavāsīṣṭha. What do you think to be the  
meaning and purpose of this exclusive emphasis on the impermanence and  
hollowness of these two things so valued by ordinary mortals ?

2. Give a summary account of the ‘Jīvanmukta’ saint as described in 12½  
the Yogavāsīṣṭha and deduce the philosophical conception of the status of  
the phenomenal world from this.

3. Fully explain the meaning of the following text and discuss the relevancy of such a doctrine to the philosophy of the Yogavāsīṣṭha which holds the whole world to be an unmitigated illusion :— 12½

“उभाभ्यामेव पक्षाभ्यां यथा खे पक्षिणां गतिः ।

तथैव ज्ञानकर्माभ्यां जायते परमं पदम् ॥

केवलात् कमणो ज्ञानाद्वाङ्मोक्षोऽभिजायते ।

किन्तुभाभ्यां भवेन् मोक्षः साधनं तूभयं विदुः ॥”

4. Translate the following into Sanskrit :—

25

On the contrary, it must be granted that the strength or weakness, intensity or incapacity of these passions and impulses, which exercise so much influence on the moral, intellectual, and spiritual progress of the individual, is derived from the previous habits of life and thought acquired in past lives. The present life and environment cannot be conceivably held responsible for all these good and evil tendencies for which sufficient latitude in time should be allowed. There is no doubt that a good deal of the ills of the present life is due to environmental conditions, which are remediable by a better adjustment of the state and society—in other words, by the present *karman* of man in his individual and collective capacity. But there will ever remain an undeniable residuum in the life of the individual, which cannot be explained in terms of the present circumstances to which a man is born. The law of *karman*, it may not be out of place here to observe, emphasizes this freedom of will and choice, which lies at the basis of all social and political reform. . . . The evils of heredity are not insurmountable barriers. They are the creations of his own and so can be altered or undone by his own efforts.

(GROUP F)

FIFTH PAPER

*The figures in the margin indicate full marks*

Full Marks-- 50

FIRST HALF

अधोलिखितेषु प्रश्नेषु द्वयं समाधेयम्

1. “आत्मशरीरेन्द्रियार्थबुद्धि-मनः-प्रवृत्ति-दोष-प्रत्यभावफलदुःखापवर्गास्त प्रमेयम् ।” 25

अवेदं पृच्छति । सत्यपि पृथिव्यादि-प्रमेयमिदं कथं हादशविधप्रमेय-कथनं सूचकारम् ? कौटुम्भं वा अपवर्गस्य निष्कृष्टं लक्षणम् ?

2. उपलब्धिहेतोः प्रमाणत्वे उपलब्धिसमवायिनि आत्मनि क ' न प्रमाणत्व-व्यवहारः ? 25

अतएव उपलब्धित्वात् तत्करणेऽपि वा कथं न प्रमाणत्वव्यवहारः ?

3. ऐतिसम्भवयोः पृथक्प्रमाणप्रतिषेधो भाष्यकारदिशा समर्थ्यताम् । 25

4. वार्षिककारसम्मतं प्रमाणत्वत्वं विशदीकृत्य प्रदर्शय । 25

## SECOND HALF

Full Marks—50

Attempt ANY THREE of the following questions, including No. 4, which is compulsory

1. Explain, after the manner of Viśvanātha, any three of the following 12½  
Sūtras :—

- (a) सेनावनवदिति चेन्न, अतौन्द्रियत्वादणूनाम् ।
- (b) युगपज्ज्ञानानुत्पत्तिः मनसो लिङ्गम् ।
- (c) व्यक्ताकृतिजातयस्तु पदार्थः ।
- (d) न ग्रहतिः प्रतिसम्बन्धाय होनक्लेशस्य ।

2. (a) Sum up the arguments with which the Naiyāyikas seek to 12½  
establish the existence of the soul, as distinct from the senses, the *manas*  
and the vital principle.

(b) What do you understand by 'nigrahasthāna'; Define, and  
illustrate with examples, any three nigrahasthānas mentioned in the Nyāya  
Sūtras.

3. (i) Describe the following *vādas* as clearly as you can and criticize 12½  
them in the light of the Naiyāyika's own metaphysical position :—

- (a) सर्वानित्यत्ववादः,
- (b) सर्वानित्यत्ववादः,
- (c) अभाववादः,
- (d) संख्यैकान्तवादः,

and (e) सर्वप्रयत्नत्ववादः ।

(ii) What is a 'hetvābhāsa'? How many kinds of hetvābhāsas are  
recognized in Nyāya Sāstra? Name and describe them, and illustrate each  
with an example.

4. Translate the following passages into English —

25

(a) किं पुनरीश्वरसदभावे प्रमाणम् ? आगमस्तावदनुमानं च । महाभूत-  
चतुष्टयमुपलब्धिमत्पूर्वकं कार्यत्वात्, यत् कार्यं तदुपलब्धिमत्पूर्वकं यथा घटः । कार्यं च  
महाभूतचतुष्टयं तस्मादेतदप्युपलब्धिमत्पूर्वकम् । प्रमाणेन पूर्वकोऽन्यनुपपत्त्येव सिद्धिं  
वृथिव्यादिषु कार्यत्वमिति चेत्, तदयुक्तम्—सावयवत्वात्, यत् सावयवं तत् कार्यं यथा  
घटः, सावयवं च वृथिव्यादि तस्मादेतदपि कार्यमेव ।

(b) सर्गाद्यकाले परमेश्वरः सृज्यमानप्रपञ्चवैचित्र्याद्भूत-प्राणिकर्मसङ्कतो  
ऽपरिमितानिर्गुणपितृशक्तिविशेषविशिष्टमायासहितः सन्नामरूपात्मकं निखिलप्रपञ्चं प्रथमं  
बुद्धौ आकलय्य इदं करिष्यामीति सङ्कल्पयति । तत आकाशादीनि पञ्चभूतानि  
अपञ्चीकृतानि तन्मात्रपद-तिपाद्यानि उत्पद्यते ।

(c) ननु कथमेत एव पदार्थाः शक्तिसादृश्यादीनामप्यतिरिक्तपदार्थत्वात् ।  
तथाहि—मप्यादिसमवहितेन वक्रिणा दाहो न जन्यते तच्छून्येन तु जन्यते ; तत्र  
मप्यादिना वक्रौ दाहानुबन्धौ शक्तिर्नाशयते, उत्तेजकीन मप्याद्यपसारणेन च जन्यते इति  
कल्प्यते । एवं सादृश्यमप्यतिरिक्तः पदार्थः ।

## SIXTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Full Marks—50*

( द्वौ प्रश्नौ समाधेयौ )

1. “किन्तु संशयिते न्यायस्तदङ्गं तेन संशयः” इति संशयस्य 25  
न्यायाङ्गत्वमुक्तं श्रीमज्जयन्तभट्टेन । तत्र को नाम न्यायः कति वा  
तस्यावयवाः ? संशयस्य न्यायाङ्गत्वं वा कथम् ?
2. “न्यायविस्तरस्तु मूलस्तम्भभूतः सर्वविद्यानां वेदप्रामाण्यहेतुत्वा”दि- 25  
त्युक्तं श्रीमज्जयन्तभट्टेन । सति वेदप्रामाण्यप्रतिपादके मीमांसादिशास्त्रे  
अस्य न्यायविस्तरस्यैव वेदप्रामाण्यप्रतिपादकत्वमिति कुतो निर्णयते ?  
षोडशपदार्थप्रतिपादनपरस्यास्य शास्त्रस्य कथं वेदप्रामाण्यप्रतिपादनपरत्वम् ?  
आसप्रामाण्यात् वेदानां प्रामाण्ये बौद्धाद्यागमानां वा कथमप्रामाण्यम् ?
3. ग्रन्थकृतसम्मतं प्रमाणलक्षणमभिधाय पराभिमतप्रमाणलक्षणानि 25  
निराकुरु ग्रन्थकृतदृष्टदिशा ।
4. प्रमाणसम्प्लवासम्प्लवयोः कुल कस्य सम्मता का युक्तिः ? 25
5. प्रमाणद्वैविध्यवादिनां मतमुपस्थाप्य निराकुरु ग्रन्थकृत- 25  
प्रदर्शितरीत्या ।
6. अर्थापत्तेः प्रामाण्यमुपपाद्य तस्या अनुमाने अन्तर्भावं प्रदर्शय 25  
श्रीमज्जयन्तभट्टमतवावृष्टेन ।

## SECOND HALF

*Full Marks—50*

प्रथमद्वितीययोरेकतरमुत्तरयता तृतीयचतुर्थयोरेकतरस्योत्तरं कार्यम्

1. लोकव्यवहारसिद्धत्वात् प्रमाणाद्यभ्युपगम्यते इति मतखण्डने 15  
श्रीहर्षसम्मता का युक्तिः ?
2. इदमस्य कारणमिति व्यवहारे खण्डनकृता कस्य नियामकत्व- 15  
मङ्गीकृतम् ?
3. समयबन्धं विना विचारो न सम्भवतीत्यस्य श्रीहर्षसम्मता कीदृशी 10  
युक्तिः ?
4. सतः कारणत्वं कया युक्त्या खण्डितं श्रीहर्षेण ? 10

## 5. अजस्तनप्रबन्धयोरेकतरस्य संस्कृतानुवादः कर्तव्यः—

25

(a) In this way the first book of the Nyāyasūtras gives us indeed a fair outline of the whole of Gotama's philosophy, while the following three books enter into a more minute examination of its details. Thus the second book treats more fully of the Pramāṇas, the third and the fourth of the Prameyas, the fifth treats of all that comes under the head Paralogisms. Some of the questions, discussed in these books, show quite clearly that they must have formed the subject of lively and long-continued controversy, for though some of the objections raised may seem to us of little importance, they prove at all events the conscientiousness of the early Naiyāyikas.

(b) The next problem that occupies Gotama is that of time—of present, past, and future. The objector—and in this case, it seems, a very real objector, for it is the opinion of the Buddhists—denies that there is such a thing as present time, because the moment we see a fruit falling from a tree, we see only that it has fallen, or that it has still to fall, but never that it is falling. Here the answer is that past and future themselves would be impossible, if the present did not exist, and on the objector's admitting such a possibility, Gotama remarks that, in that case, perception and all that springs from it would be altogether impossible, because it can only depend on what is present.

## SEVENTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Full Marks—50*

## लिखु द्वयोर्द्वयं कार्यम्

1. सापेक्षत्वादनादित्वादित्यादिकारिकायाम्,—सापेक्षत्वस्य अनादित्वस्य 25  
च किं लक्षणम् ? अत्र बहुहेतुकथने किं बीजम् ? ईश्वरनिरूपणप्रस्तावे  
अलौकिकहेतुसाधनं कथं नार्थान्तरदोषदुष्टम् ?

2. मीमांसकादिसम्मतार्थापत्तेः प्रमाणान्तरतापक्षं समाख्येय 25  
आचार्योक्तस्त्वण्डनप्रकारः विशदीकृत्य प्रदर्श्यताम् ।

3. वैशेषिकमते उपमानस्यानुमानान्तर्गतत्वं विशदीकृत्य प्रदर्श्यताम् । 25

अथवा

उपमानस्य मीमांसकसम्मतप्रमाणान्तरतापक्षे दोषमुद्गाह्य आचार्य-  
सम्मतपक्षं समर्थयत ।

## SECOND HALF

Full Marks—50

1. Discuss the age in which Udayana flourished. Are there any internal evidences in your text which may help you in the determination of his age? If so what are they? 19

Name any three arguments which occur to you in favour of the existence of God as the creator and the ruler of the world. 19

Or,

Explain clearly the two stages—*Nirvikalpa* and *Savikalpa*—in a Perception, from the Naiyāyika standpoint. 19

2. Translate the following into Sanskrit:— 25

The Advaitins take a connotative view of the universal proposition, whereas the Naiyāyikas seem to take a denotative view of it. The Advaitins say that for ascertaining a universal concomitance it is not essential that observations should be repeated several times; even a single observation can yield the knowledge of such concomitance, *only if* no exception to it is known. They mean that under favourable circumstances, a connection between two universals (smokeness and fireness) can be ascertained even by a single observation, and this suffices for inference. It may be asked, however, how do the Advaitins use, in inference, the universal proposition: 'All cases of smoke are cases of fire.' Does not this proposition state a relation between all individual fires and individual smokes? Does it not, therefore, present a denotative view of the universal proposition?

## EIGHTH PAPER

The figures in the margin indicate full marks

## FIRST HALF

Full Marks—75

## अष्टसु प्रश्नेषु त्रयाणामुत्तरं कार्यम्

1. प्रशस्तपादाचार्यसम्मता द्वित्वाद्युत्पत्तिविनाशयोः प्रक्रिया कीदृशी ? 15
2. प्रशस्तपादसम्मता सृष्टि-प्रक्रिया कीदृशी ? 15
3. धर्मं व्याख्यास्याम इति प्रतिज्ञाय षट् पदार्थानुपवर्णयतः सूत्रकृतः कथं नार्थान्तराभिधायित्वम् ? 15
4. धर्मविशेषप्रसूतात् द्रव्यगुण-कर्म-सामान्यविशेषसमवायानां साधर्म्यवैधर्म्याभ्यां तत्त्वज्ञानात् निःश्रेयसम् इत्यस्य का व्याख्या ? असौ धर्मविशेषप्रसूतादित्यस्य किं प्रयोजनम् ? 15
5. शिवादित्यमते द्रव्यगुणकर्मणां कुल के असमवायिहेतवः ? 15
6. जात्युपाध्योः कस्य किं लक्षणम् ? सोदाहरणमुत्तरं कार्यम् । 15
7. स्वर्ग-सांसारिकसुखयोः कस्य किं लक्षणम् ? 15
8. शिवादित्यमते अन्धकारस्य कया रीत्या कस्मिन् पदार्थेऽन्तर्भावः ? 15

## SECOND HALF

Full Marks—25

Translate into English any one of the following passages :—

25

(a) असिद्धिमानसिद्धः । असिद्धिश्चाश्रयासिद्धिस्वरूपासिद्धि-  
व्याप्यत्वासिद्धयन्यतमा । आश्रयासिद्धिस्तु पक्षे पक्षतावच्छेदकस्याभावः ।  
यथा मणिमयः पर्वतो वह्निमान् धूमवत्त्वादित्यादि । अत्र पर्वते पक्षे  
पक्षतावच्छेदकस्य मणिमयत्वस्याभावनिश्रये वह्निव्याप्यधूमवान् मणिमयः  
पर्वत इति परामर्शप्रतिबन्धादनुमितिर्विरहः फलम् । पक्षे हेत्वभावः  
स्वरूपासिद्धिः । यथा अयोगोलकं वह्निमद् धूमादित्यादि । अत्र पक्षेऽयो-  
गोलके धूमाभावनिश्रये वह्निव्याप्यवदयोगोलकमिति परामर्शविरहेणानुमित्य-  
भावः फलम् । हेतुत्वेनाभिमतं साध्यनिरूपितव्याप्त्यभावो व्याप्यत्वासिद्धिः ।  
यथा पर्वतो धूमवान् वह्नेरित्यादि । अत्र वह्नी धूमनिरूपितव्याप्त्यभावनिर्णये  
व्याप्तिज्ञानविरहादनुमितिप्रतिबन्धः फलम् । एवं पर्वतो वह्निमान् नीलधूम-  
वत्त्वादित्यादिप्रयोगे नीलधूमादिरपि व्याप्यतासिद्धः ।

(b) अथ देवदत्तस्तण्डुलं पचतीत्यादौ किंविशेष्यकः किम्प्रकारको बोधः  
इति चेत् । प्रथमान्तविशेष्यको बोध इति गृहाण । तथा हि । देवदत्त-  
पदाद् देवदत्तस्य, तण्डुलपदात्तण्डुलस्य, द्वितीयया कर्मत्वस्य, धातुनाधिश्य-  
णादेर्व्यापारस्य, लकारेण कृतेः, एकवचनैकत्वादेशोपस्थितिः । अनन्तरं  
तण्डुलस्य द्वितीयार्थकर्मत्वे आधाराधेयभावसम्बन्धेन, कर्मत्वस्य जनकत्व-  
संसर्गेण धात्वर्थे, तस्य जनकत्वसंसर्गेणाख्यातार्थकृतौ, तस्याश्चैकत्वस्य च  
समवायसम्बन्धेन देवदत्तेऽन्वयबोधः । तण्डुलवृत्ति-विकृतिजनकाधि-  
श्रयणादिव्यापारानुकूलकृतिमान् देवदत्त एक इत्याकारकोऽन्वयबोधो जायते ।

(GROUP I)

## FIFTH PAPER

The figures in the margin indicate full marks

## FIRST HALF

Full Marks—70

1. It has often been said of the India of the Hindus that it possessed 16  
no history. Do you agree? Write a critical note on the historical litera-  
ture of the ancient Hindus with special reference to the chronicles of  
Kāśmīra.

Or,

Attempt a critical examination of Kalhana's chronology. Discuss in 16  
this connection the value of Chinese synchronisms

2. What was Kalhaṇa's estimate of the character of (a) Tuṅjina I, 16  
(b) Durlabhaka, (c) Kaśāsa, and (d) Sussala ?

Or,

What light does the narrative of Kalhaṇa throw on the following :— 16

- (a) State of Buddhism in Kāśmīra up to the rise of the Kārkoṭa dynasty.  
(b) Relations between Kāśmīra and Kanauj in the days of the Kārkoṭas.

3. Give a detailed account of the rise and fall of the Utpala dynasty. 18

Or,

Describe the part played by queen Diddā in the history of Kāśmīra. 18

4. Explain any two of the following passages :— 8

- (a) अथ म्लेच्छगणाकीर्णे मण्डले चण्डचेष्टितः ।  
तस्यात्मजोऽभून्महिरकुलः कालोपमो नृपः ॥  
(b) म्लेच्छोच्छेदाय वसुधां हरेरवतरिष्यतः ।  
शकान् विनाश्य येनादौ कार्यभारो लवूकृतः ॥  
(c) सोऽखण्डिताश्मप्राकारं प्रासादान्तव्यं धत्त च ।  
मार्त्तण्डस्याद्भुतं दाता द्राक्षास्फीतञ्च पत्तनम् ॥  
(d) प्रातस्ततः स्वर्थं कोपात् तुरुष्कानीकनायकः ।  
सर्वाभिसारेणागच्छच्छलाहवविशारदः ॥  
(e) ग्रामे पुरेथ नगरे प्रासादो न स कश्चन ।  
हर्षराजतुरुष्केण न यो निस्प्रतिमीकृतः ॥

5. Write notes on any three of the following :— 12

- (a) Chavillakara.  
(b) Jalauka.  
(c) Pravarapura.  
(d) Yaśaskara.  
(e) कर्णाटानुगुणष्टकः ।  
(f) शाहिवंश ।  
(g) Koṭādevī.  
(h) Bhoṭṭas.

## SECOND HALF

Full Marks—50

Translate into English any two of the following passages :—

30

- (a) अथ प्रबुद्धे समीपशायिनि परिजने शान्ते च हृदयोल्कम्पकारिणि  
साञ्जसे सा समभाषत—‘आख्यं पुत्र जानामि स्वप्ने भगवतः सवितुर्मण्डला-  
न्निर्गत्य द्वौ कुमारौ तेजोमयौ बाळातपेनेव परयन्तौ दिग्भागान् वैद्युतमिव



जीवलोकं कुर्वाणौ मुकुटिनौ कुण्डलिनौ अङ्गदिनौ कवचिनौ गृहीतशस्त्रौ इन्द्र-  
गोपकह्वा रुचिरेण स्नातौ उन्मुखेनोत्तमाङ्गघटमानाञ्जलिना जगता निखिलेन  
प्रणम्यमानौ कन्ययैकया च चन्द्रमूर्त्यैव सुषुम्णरश्मिनिर्गतयानुगम्यमानौ  
क्षितितलमवतीर्णौ । तौ च मे विलपन्त्याः शस्त्रेणोदरं विदार्य प्रवेष्टु-  
मारब्धौ । प्रतिबुद्धास्मि आर्यपुत्रं विक्रोशयन्ती वेपमानहृदया' इति ।

(b) नरपतिस्तु तच्छ्रुत्वा प्रीयमाणेनान्तःकरणेन तामवादीत्—'देवि  
मुदोऽवसरे विषीदसि । समृद्धास्ते गुरुजनाशिषः । पूर्णा नो मनोरथाः ।  
परिगृहीतासि कुलदेवताभिः । प्रसन्नस्ते भगवानंशुमाली न चिरेणै-  
वातिगुणवदपत्यल्लयलाभेनानन्दयिष्यति भवतीम्' इति । अवतीर्य च  
यथाक्रियमाणाः क्रियाश्चकार । यशोवत्यपि तुतोष तेन पत्युर्भाषितेन ।  
ततः समतिक्रान्ते कस्मिंश्चित्कालांशे देव्या च यशोवत्यां देवो राज्यवर्द्धनः  
प्रथममेव संबभूव गर्भे । गर्भस्थितस्यैव च यस्य यशसैव पाण्डुतामादत्त  
जननी । गुणगौरवकान्तेव गात्रमुद्बोद्धुं न शशाक । कान्तिविसरामृत-  
तृप्तेवाहारं प्रति पराङ्मुखी बभूव । शनैःशनैरुपचीयमानगर्भभरालसा च  
गुरुभिर्वारितापि वन्दनाय कथमपि सखोभिर्हस्तावलम्बेनानीयत ।

(c) तत्र च साक्षात् सहस्राक्ष इव सर्ववर्णधरं धनुर्दधानः मेरुमय इव  
कल्याणप्रकृतित्वे मन्दरमय इव लक्ष्मीसमाकर्षणे जलनिधिमय इव  
मर्यादायाम् आकाशमय इव शब्दप्रादुर्भावे शशिमय इव कलासंग्रहे वेदमय  
इवाकृष्टिमालापत्वे धरणिमय इव लोकष्टतिकरणे पवनमय इव सर्वपार्थिव-  
रजोविकारहरणे गुरुवंचसि पृथुरसि विशालो मनसि जनकस्तपसि सुयास-  
स्तेजसि सुमन्त्रो रहसि बुधः सदसि अर्जुनो यशसि भीष्मो धनुषि निषधो  
वपुषि शङ्खः समरे शूरः शूरसेनाक्रमणे दक्षः प्रजाकर्म्मणि सर्वादिराजतेजः-  
पुञ्जनिर्मित इव राजा पुष्पभूतिरिति नाम्ना बभूव ।

## SIXTH PAPER

Full Marks—50

The figures in the margin indicate full marks

Attempt FIVE questions only, including Questions Nos. 1 and 2

1. (a) Duvādasavasābhīsitena me iyaṃ ānapayito : Savatā vijītasī man-  
ya utā lajūke pādesike paṃchasa paṃchasa vāsesu anusaṃyānaṃ nīyātu etāye  
va athāye imāye dhaṃvānusaṃsatīyā yathā apnāye pi kaṃpāye[.]

(b) Nathi chā shā janapade yatā nathi ime nikāyā ānātā  
Y(o)neśh(a) baṃpāhane chā samane chā nathi chā kuvā pi janapadeshi yatā  
nathi mānushāna ekatalāshi pi pāshādāshi nō nāma pashāde[.]

(c) Lajūkā me bahūsu pānasatasahasasu janasi āyatā[;] tesam ye  
abhihāle vā dāpde vā atapatiye me kaṭe kiti lajūkā asvathā abhītā  
kaṃpāni pavatayevu.....Athā hi pajam viyatāye dhātīye nījītu  
asvathe hoti—viyatā dhāti chaghati me pajam sukham palihātave hevam  
mamā lajūkā kaṭā jānapadaśa hitasukhāye[.]

(d) Dhammamahāmātāpi me te babuvidhesu aṭṭhesu ānugahikesu viyāpaṭā se pavaṃṭanaṃ cheva gihithānaṃ cha[:] savapāsāṃḍesu pi cha viyāpaṭā se [:] saṃghaṭasi pi me kaṭe ime viyāpaṭā hohamti ti[:] hemeva bābhanesu Ājivikesu pi me kaṭe ime viyāpaṭā hohamti-ti[:] Nigamṭhesu pi me kaṭe ime viyāpaṭā hohamti[:] nānāpāsāṃḍesu pi me kaṭe ime viyāpaṭā hohamti ti[:]

- |   |    |
|---|----|
| (i) Transcribe extract (b) in Aśoka's Brāhmī or Kharoṣṭhī.  | 8  |
| (ii) Rewrite extract (c) or (d) in Sanskrit.  | 8  |
| (iii) Translate extract (a) or (c) into English, adding notes where necessary.  | 10 |
| (iv) What light is thrown by extracts (b) and (d) on the religious sects of ancient India and their influence over the Indian people?   | 8  |
| 2. Write short explanatory and critical notes on any four of the following :—   | 18 |
| (a) <i>Esā porāṇā pakiti.</i>   |    |
| (b) <i>Sāravaḍḍhī aso sava-pāsāṃḍānaṃ.</i>  |    |
| (c) <i>Ubalike kaṭe aṭṭhabhāgiye cha.</i>   |    |
| (d) <i>Tiṇṇi divasāni me yote diṇṇa.</i>  |    |
| (e) <i>Nijhatī va bhuye.</i>  |    |
| (f) <i>Tenesā dhammayātā.</i>   |    |
| 3. What were the prescribed rules to be followed in preparing the royal writs, and to what extent those rules were followed in the edicts and writs of Aśoka?                               | 16 |
| 4. What are the circumstances that led Aśoka to have recourse to <i>dhammānusāsi</i> and <i>dhamma-sāvana</i> , and to what extent did these prove effective according to his own estimate? | 16 |
| 5. What are the various claims made by Aśoka as a reformer of the then prevalent Indian faiths and Indian administrative system?  | 16 |
| 6. Give a critical analysis of R. E. XIII, indicating the historical importance of its contents.  | 16 |
| 7. Discuss the importance of the inscribed records of Aśoka as autobiographical sketches.   | 16 |

## SEVENTH PAPER

Full Marks—100

The questions are of equal value

## FIRST HALF

Attempt ANY FOUR questions

1. Translate the following verses into English, explaining the allusions contained therein :—

(a) धैर्येण मेरुमभिजातिगुणेन वैश्य-  
मिन्द्रं प्रभासमुदयेन बलेन विष्णुम् ।  
सम्बर्त्तकानलमसह्यतमञ्च दीप्तग  
यो विक्रमेण च सुराधिपतिं विजिग्ये ॥

- (b) आलौहित्योपकण्ठात्तालवनगहनोपत्यकादामहेन्द्रा-  
दागङ्गादिकृष्टसानोस्तुहिनशिखरिणः पश्चिमादापयोधेः ।  
सामन्तैर्यस्य बाहुद्विणहतमदैः पादयोरानमञ्जि-  
श्रृङ्गारलांशुराजिव्यतिकरशबला भूमिभागाः क्रियन्ते ॥
- (c) बहुनयविधिवेधा गह्वरेऽप्यथमार्गे  
विदुर इव विदूरं प्रेक्षया प्रेक्षमाणः ।  
वचनरचनबन्धे संस्कृतप्राकृते यः  
कविभिरुदितरागं गीयते गीरभिज्ञः ॥

2. Comment on the following :—

- (a) दैवपुङ्गव-पाहिषाहानुषाहिशकमुखैः ।  
(b) यातेषु चतुर्षु कृतेषु शतेषु सौम्येष्वशीतसोत्तरपदेष्विह वत्सरेषु ।  
(c) चूडापुष्पोपहारैर्मिहिरकुलनृपेणाञ्जितं पादयुग्मम् ।

3. Ascertain from the Allahābād pillar inscription how far Samudragupta was successful in bringing about the political unification of India.

4. Give an analysis of the Junāgaḍh rock inscription of Skandagupta. State also if you know anything about the construction and an earlier restoration of the embankment forming the Sudarśana lake.

5. State all you have learnt about Chandragupta II from the inscriptions you have read.

6. What light do the Damodarpur copperplates throw on the constitution of the District office, and what was the usual procedure adopted in the purchase of lands?

## SECOND HALF

Attempt ANY THREE

1. Write a note on the Candras of Eastern Bengal, with special reference to the Rampal grant of Śricandradeva.

2. Give a brief account of the victories of Rājendravarṇa from the Tirumalai rock inscription.

3. Translate the following into English, adding historical and critical notes :—

(a) *Jitvendraraṅga-prabhṛti-narāṇinupārjitā yena Mahodayaśrīḥ | dattā punaḥ sā Balinārthayitre Cakrāyudhāyānati-Vāmanāya ||*

(b) *Pratāp-opanatā yasya Lāṭa-Mālava-Gurjarāḥ | daṇḍ-opanata-sāmanta-caryy-ācāryyā iv-ābhavan.*

4. Write a short note on the career of the Calukya Pulakeśin II with special reference to his Aihole inscription.

5. Transcribe into Roman or Devanāgarī character the passage appearing on the attached plate.





## EIGHTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Full Marks—50*

*THREE questions are to be attempted, including Question No. 6*

1. 'In addition to a wider geographical outlook, the Brāhmaṇa period is marked by the knowledge of towns and definite localities.' Discuss this statement. 15
2. Cunningham says that the ancient Indians had a very accurate knowledge of the true shape and size of their country. Do you agree? Give reasons for your answer. 15
3. Write a critical note on the Nava-khaṇḍa or Nine Divisions of India as described by Hindu (a) geographers, and (b) astronomers respectively. Discuss the relative value of the two accounts. 15
4. Explain the following expressions :— 15
  - (a) Bāhika.
  - (b) Pūrva-deśa.
  - (c) Vindhya-dakṣiṇa-pāda.
  - (d) Kula-parvata.
  - (e) Varsha-parvata.
5. Discuss the identity of the rivers issuing from the Mahendra and Malaya ranges. 15
6. Write detailed notes on the topography of any four of the following territories :— 20
  - (a) Vāṅga.
  - (b) The Kuru country.
  - (c) Gandhāra.
  - (d) Mālava.
  - (e) Audhra.
  - (f) Chola-maṇḍala.
  - (g) Gauḍa.
  - (h) Magadha.

## SECOND HALF

*Full Marks—50*

*Translate into idiomatic Sanskrit any two of the following passages :—*

(a) Religion in its widest sense includes on the one hand the conception which man entertains of the divine or supernatural powers and, on the other, that sense of the dependence of human welfare on those powers which finds its expression in various forms of worship. Mythology is connected with the former side of religion as furnishing the whole body of myths or stories which are told about gods and heroes and which describe their character and origin, their actions and surroundings. Such myths have their source in the attempts of the human mind, in a primitive and unscientific age, to explain the various forces and phenomena of nature with which man is confronted. They represent in fact the conjectural science of a primitive mental condition. 25

(b) The answer to the next question, whether the conversion of the Mānava Dharmasūtra was effected at one time or by degrees, and whether Bhṛṅgu's recension has to be considered as the immediate offspring or as a

remote descendant of the Sūtra, must, I think, be answered in the sense of the first alternative. Not long ago it seemed that the contrary opinion was the more probable one. But the closer one examines the fact which at first sight seem to lead up to the inference that Bhṛgu's *Manu-saṃhitā* forms the last link in a long chain of metrical Manuscripts, the more one sees that they possess no, or very little, importance. On the other hand, those arguments which speak in favour of our text being one of the first attempts at a conversion of a Vedic school-book into a special law-book, gain by the same process in force and increase in number.

(c) Then the Bodhisattva, to explain why he did not grieve, recited the remaining stanzas: 'To change the past all sorrow is but vain, it has no blessing in a future state: Why should I, Vaṅka, complain of my woes? Grief is no companion fit with us to mate. One that is sick with sorrow pines away. Pierced as with arrows, to his grief a prey, he sinks a laughing stock to all his foes. Whether my home be on dry land or sea, be it in village, or some forest drear, no sorrow shall ever come nigh to me. A soul converted can have nought to fear. But he that lacks completion in himself and is afire with lust of things of sense, not the whole world, with all its sordid pelf, can ever suffice for such a man's desire.' Vaṅka, therefore, after hearing these four stanzas, asked forgiveness of the Bodhisattva, and restored him to his kingdom and went his way. But the Bodhisattva handed over the kingdom to his ministers and retreating to the Himālayas became an ascetic.

## PĀLI

### INTERNAL EXAMINERS

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### EXTERNAL EXAMINERS

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### FIRST PAPER

*The questions are of equal value.*

*Six questions are to be attempted, including Questions 1 and 9.*

1. Translate any two of the following extracts into English, adding critical notes where necessary:—

(a) *Yathā nu kho imāni bhante puthu-sippayātanāni—seyyathidam hatthārohaṃ, assārohaṃ rathikā dhanuggahā celakā celakā piṇḍa-dāvikā uggā rāja-*

Yathā pi selā vipulā, nabham āhacca pabbatā |  
 Samantānupariyeeyup, nipphoṭento catuddisā |  
 Evam jarā ca maru ca, adhivattanti paṇino |  
 Khattiye Brāhmaṇe Vesse Suddhe Caṇḍālā-Pukkuse |  
 Na kiñci parivajjeti, sabbam evābhimmaddati ||  
 Na tattha hathhinam bhūmi, na rathānam na pattiyā |  
 Na cāpi manta-yuddhena, sakkā jetum dhaneva vā ||  
 Tasmā hi paṇḍito poṣo, saṃpassam attham attano |  
 Buddhē Dhamme ca Saṅghe ca, dhīro saddham nivesaye ||  
 Yo dhammacārī kāyena, vācāya uda cetasā |  
 Idh' eva naṃ paśamsanti, pecca sagge pamodati ||



## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be attempted, of which Question No. 1 is compulsory*

1. Translate the following extracts into English :—

(a) Tena kho pana samayena aṇṇataro bhikkhu aṇṇiṇi viharati, tassa ca tasmim̐ senāsane phāsu hoti. Atha kho tassa bhikkhuno etadahosi : 'Bhagavatā paṇṇattam̐ na anissitena vatthebbanti, ahañ c'amhi nissayakaraṇiyo, aṇṇiṇi viharāmi, mayhañ ca imasmim̐ senāsane phāsu hoti, kathaṃ nu kho mayā paṭipajjitabban' ti. Bhagavato etaṃ atthaṃ śrocesum̐. 'Anujānāmi bhikkhave ārañṇakena bhikkhunā phāsu viharāṃ sallakkhentena nissayaṃ alabhamānena anissitena vatthum̐, yadā paṭirūpo nissayaḍḍyako āgacchati, tassa nissāya vasissāmi ti.

(b) Sūnātu me bhante Saṃgho. Ayaṃ itthannāmo itthannāmassa āyasmato upasampadāpekkho, parisuddho antarāyikehi dhammehi, paripuṇṇ'assa pattacivaraṃ. Itthannāmo saṃghaṃ upasampadam̐ yācati itthannāmena upajjhāyena, saṃgho itthannāmaṃ upasampādeti itthannāmena upajjhāyena. Yassāyasmato khamati itthannāmassa upasampadā itthannāmena upajjhāyena, so tuṇh'assa yassa nakkhamati so bhāseyya.

2. Write notes on *any five* of the following :—

Ñatti, Pavāraṇā, anupajjhāyaka, sapadānam̐, pabbājauṇīyakammaṃ, Tīcīvarena avippavāsa.

3. Trace the development of Pabbajjā and Upasampadā in the Buddhist Order.

4. Write a note on the general structure of the Vinaya Piṭaka, specially bringing out the non-Vinaya elements in it.

5. Mention some of the Uposatha rules, noting in particular their bearing upon the solidarity of the Order.

6. Mention the circumstances under which the following orders were promulgated:—

(a) Anujānāmi bhikkhave upajjhāyam̐.

(b) Na bhikkhave rājabhaṭṭā pabbājetabbā.

(c) Anujānāmi bhikkhave ūnapannarasa vassam̐ dārakam̐ kākutṭepam̐ pabbājetum̐.

(d) Tiracchānagato bhikkhave anupasampanno na upasampādetabbo, upasampanno nāsetabbo.

(e) Na bhikkhave evarūpā katikā kētabbā antarāvassam̐ na pabbājetabbam̐.

## SECOND HALF

*Attempt THREE questions only, Question No. 5 being compulsory*

1. Write a note on the *Prātimokṣa-sūtra* with special reference to the following points : its origin, different versions and their mutual relationship, extant literature, and necessity and place in the religion preached by the Buddha.

2. Discuss the importance of the *Prātimokṣa*, giving a clear idea of its contents.

3. Give a critical account of the *adhikaraṇasamātha dhammas*.

4. Write short notes on the following :—

- (i) *anṅulipratodana, adhvaṃmārga, antarāyika dharma, bijagrāma, civaracetanaka upaskṛta.*
- (ii) *visibbanāpekkha, sugatacivarappamāṇa, sekha, pārivaṭṭaka, aniyata dhammas.*
5. (a) *omasavāde, aññavādake vihesake, ujjhāpanake khīyanake pācittiyam.*
- (b) *pattasaññī sakkaccaṃ piṇḍapātaṃ bhuñjissāmi.*
- (c) *yo pana bhikkhu bhikkhussa anattamaṇo kupito talasattikaṃ uggireyya pācittiyam.*
- (d) *kiṃ pan'imehi khuddānukhuddakehi sikkāpadehi uddiṭṭhehi yāvadeva kukkuccāya vihesāya vilekhāya saṃvattatīti.*
- (i) Explain fully the passages quoted above.
- (ii) Write a note on *khuddānukhudda sikkhāpada* in (d).

### THIRD PAPER

#### FIRST HALF

The figures in the margin indicate full marks

A

Answer Question No. 1 and EITHER of 2 and 3

1. (a) Comment on any four of the following Prakrit forms :— 4

बाहुड, गमिअ, अच्छरिअ, घेऊण, कणेह and सुणिज्जइ ।

- (b) Give the meanings of the following *nīpātas* and frame sentences in Prakrit to illustrate their use :— 6

अलाहि, सू, किणो and णवर ।

- (c) Render into Prakrit :— 12

(i) सखि विचक्षणे अस्माकं पुरतः त्वं कवित्वेन उत्ताना असि ।

(ii) त्वं पुनः तस्य गच्छ यत्र मे मातुः प्रथमा दन्तावली गता ।

(iii) एषः नगरात् देवीनाम् आज्ञासिहरः करभक आगतः ।

(iv) अतएव खलु निर्वन्धः स्निग्धजनसंविभक्तं हि दुःखं सद्यवेदनं भवति ।

2. (a) Give Prakrit examples of the changes of Sanskrit *r* into *ri*, *ṛh* into *ṛh*, *y* into *l*, and *u* into *a*. 4

- (b) How are Sanskrit *ai*, *k*, *ś*, and *p* represented in Pali and Prakrit ? Give examples. 8

- (c) State the general rules of the change of Sanskrit conjuncts into Pali and Prakrit and note some of their exceptions. 8

- (d) Discuss the genders of any three of the following words giving their Prakrit forms :— 8

पृष्ठ, अक्षि, प्रश्न, शरत् and प्राबुद् ।

3. (a) Mention the peculiarities of *Māgadhi* and *Sauraseni* regarding conjugation, declension, and the indeclinable. 6

(b) Illustrate the uses of the Fourth case-ending in Pali and explain the following rules, giving examples :—  
*tumatthe* and *yena vā adassanam*. 6

(c) Mention the peculiarities of the conjugation of Pāli verbs in *aorist* and *perfect*. 6

## B.

1. (i) Write down the schemes of any three of the following notations :  
*bha, ya, ja, sa* and *ra*. 3

(ii) Define any three of the following metres : *Samānikā, Campakamālā, Dodhaka, Mālīnī* and *Sikharinī*. 6

(iii) Scan one of the following stanzas :— 6

(a) *Aniccā vata saṃkhārā uppādayadhammino |*

*Uppajjitvā nirujjhanti, tesaṃ vūpasamo sukho ||*

(b) *Abhūtavādī nirayaṃ upeti yo vāpi katvā 'na karomi' c'āha |*

*Ubhō pi te pecca saṃā bhavanti nibhīnakammā manuṣā paratthā ||*

(iv) *Either,*

Determine the structure of the sixth variety of the *Anuṭṭhubha*. 5

*Or,*

Determine the number of that variety of the *Gāyattī*, the structure of which is as follows :—

. — — — — .

## SECOND HALF

## PALI PHILOLOGY : 40 Marks

*The questions are of equal value : select THREE questions only*

1. (a) Write a note on the Indo-European speech-family, indicating the place of Pali in the family.

(b) Comment on the view : ' Pali is the language of the Buddha.'

2. Discuss the position of Pali as a literary speech, and indicate the various strata in the history of Pali.

3. Institute a brief comparison of Pali with Vedic and with the later Prakrits, in phonology and morphology. Was Pali ever a spoken language ? If so, when and where was it spoken ?

4. Discuss the etymology of eight of the following Pali words, noting points of interest in phonology and in other matters : *Kahāpaṇa, Yona-desa, Milinda, Bāvera-raṭṭha, Lālaraṭṭha, dāṭhā, vutta, uyyāna, Okkāka, mahimsa, jāgarati, Brāhmaṇa, atraja, paṭhavī, kissa, aṭṭhārasa*.

*Or,*

Write notes, with illustrative examples, on *Palatalisation* and *Cerebralisation* in Pali.

5. Discuss the history of the pronouns of the First and Second Persons and the demonstratives in Pali.

*Or,*

Discuss the numerals in Pali.

6. Write a note on the formation of the Past tense of the Verb in Pali.

## FOURTH PAPER

*The questions are of equal value**Attempt six questions only*

1. Give a brief account of the political and religious condition of Northern India at the time of the rise of Buddhism.

2. What is your opinion about the relative antiquity of the Pāli and the Sanskrit Tripitaka?

In which language, in your opinion, did Buddha preach? State reasons for your opinion.

3. When and how was Buddhism propagated in Southern India and Ceylon? Name some of the important centres where archaeological remains still testify to the once palmy days of Buddhism.

4. 'In the first few centuries of the Christian era Central Asia was largely Aryan in speech and culture.' Support this statement by references to the Buddhist manuscripts discovered in Central Asia.

5. Give an account of the literary or religious activities of *any four* of the following :—

Nāgārjuna; Kuṇḍarāja; Vasumitra; Asaṅga; Mahākassapa;  
Moggalliputta Tissa; Mahākaccāyana.

6. Explain the main doctrinal agreements and differences between Hinayāna and Mahāyāna.

7. Show how the Buddhist conception of the Middle Path has been best brought out through the Avyākatas.

8. Analyze the causes that led to the disappearance of Buddhism in India.

9. Explain the following terms with special reference to the constitution of the Saṅgha :—

ñatticatuttha kamma; saṅghakamma; chanda; ubbāhika; sammukha-  
vinaya; saḷākāgāhāpaka.

10. Bring out the meaning of the following terms from the standpoints of Hinayāna and Mahāyāna :—

Aparisamkhyā nirōdha; Apatīṭṭhita viññāpa; Anupādisesa  
nibbānadhātu; Suddhātā.

(GROUP C.)

## FIFTH PAPER

*The figures in the margin indicate full marks**Answer Question No. 1 and ANY FIVE of the rest*

1. Translate *any three* of the following passages into English :—

20

(a) Thero anekasaṃkhyamhā bhikkhusaṃghā viśārade  
chaḷabhiññe teṭṭake pabbinnapaṭisaṃbhide  
bhikkhusaṃghassaṃ uccini kātuṃ saddhammasaṃgahaṃ  
tehi Asokārāmaṃhi akā saddhammasaṃgahaṃ.

(b) Rājā karitū karitvanto vajjavāmaṇḍalaṃ akā,  
tathāpi chiddaṃ na disvā laṅghapetuṃ matim akā.  
Vajjavāya laṅghāpetvā hatthināṃ bhāṭikopari  
tomaraṃ khipi, cammaṃ va yathā chindati piṭṭhiyaṃ.

(c) Nissāre dhananicāye visesa-sāram  
ye dānaṃ pariganayanti sādhu-paññā,  
te dānaṃ vipulam apetacittasaṅgā  
sattānaṃ hitaparamā dadanti evaṃ ti.

(d) Tato pacchā ca Goṭhābhayaṃ nāma rañño kāle Abhayagiri-vāsino bhikkhū parassamuddaṃ pabbajetvā Mahāvihāravāsino bhikkhū nissāya sāsanaṃ visodhayi. Tato pacchā pi Goṭhābhaya-rañño puttabhūtaṃ Mahāsenaṃ nāma rañño kāle Abhayagiri-vāsinaṃ bhikkhūnaṃ abbhantare Saṃghamitto nāma eko bhikkhu rañño padhānācariyo butvā Mahā-Mahindatherādinaṃ arahantānaṃ nivāsaṭṭhānabhūtaṃ Mahāvihārārāmaṃ vinassituṃ Mahā-senaraññā mantetvā ārabhi

2. Estimate critically the value of the Mahāvamsa as the political and ecclesiastical history of Ceylon. 16

3. What light does the Mahāvamsa throw on the activities of Aśoka for the propagation of Buddhism both in and outside his empire? 16

4. Sketch the history of the reign of Devānampiyatissa with special reference to his activities for the establishment of Buddhism in Ceylon 16

5. Write historical and geographical notes on *any six* of the following :— 16

(i) Anurādhapura, (ii) Abhayagiri-vihāra, (iii) Lobapāsāda, (iv) Kalyāṇi, (v) Cetiya-pabbata, (vi) Colaraṭṭha, (vii) Tāmalitti, (viii) Kaccakattittha, (ix) Pāvā, (x) Lālaraṭṭha, (xi) Vedisā, and (xii) Sopanamāli.

6. Write biographical notes on *any four* of the following :— 16

(i) Ariṭṭha, (ii) Elāra, (iii) Sāliśājakumāra, (iv) Mahāsena, (v) Goṭhākābhaya, and (vi) Revatathera.

7. Describe briefly the important incidents of the reign of *either* Duṭṭhagāmaṇi Abhaya *or* Vaṭṭagāmaṇi Abhaya as recorded in the Mahāvamsa. 16

8. Analyse the forces that helped the propagation of Buddhism in Ceylon. 16

9. Give a short account of the controversy relating to *Pārupana-Ekaṃsika* as related in the Sāsana-vamsa. 16

10. What light does the Sāsana-vamsa throw on the contributions of the Burmese scholars to the Pali literature? 16

## SIXTH PAPER

*The figures in the margin indicate full marks*

*Attempt six questions only, including Questions Nos. 1 and 2 which are compulsory*

1. (a) Sarvata vijitamhi Devānaṃpriyasa Priyadasino rañño evaṃ api prachamtesu yathā Choḍa Pāḍa Satiyaputo Ketalaputo ā Tambapannaṃ Aṃtiyako Yonarañja ye vā pi tassa Aṃtiyakasa sāmipam rājāno sarvata Devānaṃpriyasa Priyadasino rañño dve chikicchā katā-manusa-chikicchā cha pasu-chikicchā cha[.]

(b) Savatra cha aṭham janasa karomi aham yam cha kicchi mukhato anapemi avayam dāpakaṃ va āravake(ṃ) va ya va pana mahamatranaṃ achayikaṃ aropitaṃ bhoti taye aṭhaye vivade samptaṃ nijhāti va parishaye anamteriyeṃ paṭivedetavo me savatra savra kalam[.]

(c) *Tata tuphehi icchitaviye kimpī 'majham paṭipādayemā' ti[.] Imehi chū jātehi no sampaṭipajati-isāya āsulopena niṭhuliyena tulanāya anāvutīya ālasīyena kilamathena[.]*

(d) *Baṃḍhanabaddhānaṃ munisānaṃ ttitadampdānaṃ patavadhānaṃ tūpni divasāni me yote dippe nātikā va kāu niḥapayisampi jīvītāye tānaṃ nāsumptaṃ vā niḥāpayitā dānaṃ dāhampi pālātikaṃ upavāsaṃ va kachhampi[.]*

- |   |    |
|---|----|
| (i) Transcribe extract (b) in Aśokan Brāhmī or Kharoṣṭhī.   | 8  |
| (ii) Rewrite extract (d) in idiomatic Pali or Sanskrit.   | 8  |
| (iii) Translate extracts (a) and (d) into English, adding notes where necessary.                              | 12 |
| (iv) Fully explain extract (c) bringing out the significance of the term <i>majha</i> as understood by Aśoka. | 6  |
2. Write short explanatory and critical notes on *any four* of the following :—

- Ekatiyā samājā sādhumatā.*
- Bherighoso aho dhammaghoso.*
- Sāravaḍḍhi asa sava-pāsampdānaṃ.*
- Baṃḍhana-mokhāni kaṭāni.*
- Dhammaniyamānti yāni me kaṭāni.*
- Yam kicchi dakkhāmi hamaṃ tam icchāmi.*
- Dutiyaṃ devisa ti Tiralamātu Kālurākiye.*
- Sakiyanaṃ sukitti-bhātinaṃ sabhaginikanaṃ saputadalanam.*

3. (a) How would you account for the setting up of the Schism Edict at Sanchi, Kausambi, and Sarnath? 13

(b) How is it that some of the Kals' set of Fourteen Rock Edicts agree in both language and contents with the texts other than those of Shahbazgarhi and Manshira, and some, with the texts of Shahbazgarhi and Manshira?

4. Discuss how the Rock, the Pillar, the Minor Rock, the Separate Rock, the Minor Pillar, and the Barabar Cave inscriptions form distinct cantos in the Aśokan epic. 13

5. What are the various data of religious history of ancient India which may be gathered from the records of Aśoka? 13

6. Referring to the history of the Buddhist Saṃgha, a writer observes: 'As soon as the strong hand of the commander is withdrawn, disintegration overtakes the life of unity and an authoritative royal ordinance is called forth to prevent disunion and dissension playing havoc.'

Criticise this in the light of Aśoka's edicts.

7. Ascertain the relative chronological position of the edicts of Aśoka, the inscriptions of Daśaratha, the Piprawa Vase inscription, and the Sogaura Copper-plate from the point of view of the evolution of Indian palaeography. 13

8. Give a critical analysis of Aśoka's Dhamma, pointing out how far and in what respects its teachings agree with or differ from the main principles of Buddhism. 13

9. Discuss the position of Aśoka as a reformer and an advocate of the cause of progress. 13

## SEVENTH PAPER

## FIRST HALF

*The questions are of equal value*

*THREE questions to be attempted*

1. What light does the Allahabad Pillar Inscription throw on (a) the conquests of Samudra-gupta, (b) his relations with foreign powers, and (c) his literary accomplishments and musical skill ?

2. 'The Gupta Age was an age of tremendous revival in the intellectual world.' Explain.

3. What was the position of Buddhism in the Gupta period ? Refer in this connection to the importance of the Sāñchi, Mankuwar, and Bodhi Gayā Inscriptions.

4. Comment on the following :—

(a) hataripuriva Kṛishṇo Devakṛimabhyupetaḥ,

(b) Urjayata priyepsunā...nadimayo hasta iva prasāritaḥ,

(c) Pañchendrāmsthāpayitvā dharaṇidharamayān,

(d) Vishayapati Sarvanāgasyāntarvedyām bhogābhivṛddhaye vartamāne.

5. Write short notes on any four of the following :—

(i) Bandhuvarman,

(ii) Vatsabhuṭṭi,

(iii) Uparika,

(iv) Koṭivarsha-vishaya,

(v) dināra,

(vi) kulyavāpa,

(vii) Mantri Kumārāmātya,

(viii) Mahārājādhirāja Śrī Chandra-guptasya Deva-rāja iti

priyanām.....

## SECOND HALF

*The figures in the margin indicate full marks*

*THREE questions to be attempted, including Question No. 1 which is compulsory*

1. (a) Aṭhame cha vase mahati-senāya.....Goradhagiriṃ ghātāpayitā Rājaguhānaṃ papiḍāpayati [...] etinaṃ cha karmmapadāna-panādena sambhita-senavāhane vipamumchitum Madhuraṃ apayāto[.]

(b) Bhaṭārakā apñītiyā cha gatosmiṃ varsharatum Mīlavahi rudhaṃ Utamabhādraṃ mochayitum cha Mālayā pranāden'eva apayātā[.]

(c) Mahārājasya Devaputrasya Huvaśhkasya savatsare 50 | hamanta māsa | divasa.....asyāṃ purvāyāṃ bhikṣuṇā Budhavarmanah Śakya .....pratishṭāpitā sarva-Buddhapūjārtham anena deydharma-paritvā-gena upādhyāyasya Saṃghadāsaṃ nirvāṇāvāptaye-stu[.]

(i) Transcribe extract (a) or (c) in the Brāhmī characters of the Kushāna period. 5

(ii) Translate extracts (a) and (b) into English, adding notes where necessary. 10

(iii) Rewrite extract (a) in Pāli or Sanskrit. 5

2. Write short explanatory and critical notes on *any three* of the following :— 15

- (a) *tatiye Kalīṅga-rājavamśe purisa-yuge.*
- (b) *Naṃdarāja-tivasata-oghāṭṭaṇi paṇāḍiṃ.*
- (c) *savapāsamḍa-pūjako sava-devāyatana-saṃkārakārako.*
- (d) *Rājña Śvaghoshasya chatariṣe savachhare.*
- (e) *Rājñah Māḍhariputrasya Śivadatt-Ābhīraputrasya  
Ābhīrasy-Ēśvarasenasya saṃvatsare navame.*

3. Who is the Śātakaṇi of Paṅchima disa referred to in the Hāthigumphā Inscription of Khāravela? Ascertain the extent of dominions of the Śātakaṇis mentioned in the Nasik cave inscriptions. 15

4. Test the reliability of the Pauranic dynastic list of the Śātakaṇi-Śātavāhanas in the light of the data afforded by the inscriptions. 15

5. Write all that you know about the Kshaharāta Kshatrapas from their inscriptions. 15

6. Determine the position of Kālīṅga as an independent eastern kingdom under the rule of the Meghavāhana kings. 15

## EIGHTH PAPER

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE of the following questions*

1. Discuss the foreign sources of the ancient geography of India.
2. Write a geographical note on Takṣaśilā and bring out its rôle in the ancient history of Buddhism.
3. What, according to you, are the principal routes along which Buddhism spread during the first three centuries of its existence?
4. Describe in brief outline the routes followed by Hiuan Tsang in course of his travels in Northern India.
5. Write notes on *any five* of the following: Gandhāra, Isipatana, Sāvattī, Na-lan-to, Kiu-she-na-kie-lo, Rāmagrāma, Tāmralipti.

### SECOND HALF

#### (ESSAY)

Write an essay on *any one* of the following :—

- (a) Ideals of *Ahiṃsā* and Dhamma-vijaya as expounded in Inscriptions.
- (b) 'The unique glory of Samudragupta lies in his bewildering versatility.'
- (c) The Holy Land of Buddhism as described by the Chinese pilgrims.
- (d) Ceylonese patrons of Buddhism in the centuries immediately preceding the Christian era.



(GROUP D)

FIFTH PAPER

FIRST HALF

*The figures in the margin indicate full marks**Answer Question No. 1 and ANY TWO of the rest*

1. Translate into English any six of the following slokas :—

80

- (a) रत्नप्रभोद्भासिनि यत्न लेभे  
तमो न दारिद्र्यमिवावकाशम् ।  
परार्ध्यपौरैः सहवास-तोषात्  
कृतास्मितेवातिरराज लक्ष्मीः ॥
- (b) वाता ववुः स्पर्शसुखा मनोशा  
दिव्यानि वासांस्यवपातयन्तः ।  
सूर्यः स एवाध्यधिकं चकाशे  
ज्ज्वाल सौम्याच्चि रनीरितोऽग्निः ॥
- (c) तदा हि तज्जन्मनि तस्य राज्ञो  
मनोरिवादित्यसुतस्य राज्ये ।  
चचार हर्षः प्रणनाश पाप्मा  
ज्ज्वाल धर्मः कलुषः शशाम ॥
- (d) कीर्णं तथा राजपथं कुमारः  
पौरैर्विनीतैः शुचिधीरवेशैः ।  
तत्पूर्वमाळोक्य जहर्ष किञ्चि-  
न्मने पुनर्भावमिवात्मनश्च ॥
- (e) इयञ्च निष्ठा नियतं प्रजानां  
प्रमाद्यति त्यक्तभयश्च लोकः ।  
मनांसि शङ्के कठिनानि नृणां  
स्वस्थास्तथा ह्यध्वनि वत्तमानाः ॥
- (f) हलभिन्नविकीर्णशब्दभां  
समवेक्ष्य रसां तथाविधां तां  
स्वजनस्यैव वधे भृष्टं शुशोच ॥

- (g) इति सुहृदमिवानुशिष्य-कृत्ये  
तुरङ्गवरं नुवरो वनं यियासुः ।  
सितमसितगतिद्युतिर्वपुष्मान्  
रविरिव शारदमभ्रमाहरोह ॥
- (h) धीमन्नुदारः खलु निश्चयस्ते  
यस्त्वं युवा जन्मनि दृष्टदोषः ।  
स्वर्गापवर्गौ हि विचार्य्य सम्यग्  
यस्यापवर्गं मतिरस्ति सोऽस्ति ॥
- (i) प्रियेण वश्येन हितेन साधुना  
त्वया सहायेन यथार्थकारिणा ।  
गतोऽय्यपुत्रो ह्यपुनर्निवृत्तये  
रमस्व दिष्ट्या सफलः श्रमस्तव ॥
- (j) मेघाम्बु कक्षाद्रिषु या हि वृत्तिः  
समीरणाकर्माग्निमहाशनीनाम् ।  
तां वृत्तिमस्मासु करोति शोको  
विकर्षणोच्छोषणदाहभेदैः ॥

2. What do you know of Aśvaghoṣa and his parentage? Discuss his 10 influence on Kālidāsa.

3. Give the meaning of any four of the following extracts, indicating 10 the context where necessary :—

- (a) शमात्मके चेतसि विप्रसक्ते प्रयुक्तयोगस्य यथेन्द्रियाणि ।  
(b) विस्तीर्णविज्ञानमहो नराणां हसन्ति ये रोगमयैरमुक्ताः ।  
(c) वियुज्यमानेऽपि तरौ पुष्पैरपि फलैरपि ।  
पतति छिद्यमाने वा तरुन्यो न शोचते ॥  
(d) न कामकारो मम नास्य वाजिनः  
कृतानुयासः स हि दैवतैर्गतः ।  
(e) अजस्य राजस्तनयाय धीमते  
नराधिपायैन्प्रसन्नाय मे स्पृहा ।  
(f) सन्तापहेतुर्न सुतो न बन्धुरज्ञाननैमित्तिक एष तापः ।  
(g) भूभृत्पराध्योऽपि सपक्ष एव प्रवृत्तदानोऽपि मदानुपेतः ।

4. Give an account of the philosophical doctrines of Arāḍa. Why, did 10 they not appeal to Siddhārtha?

## SECOND HALF

THREE questions to be attempted including Question No. 5

1. Summarize the **कुलपरिशुद्धिपरिवर्तः**.

2. (a) What stage does the Lalitavistara represent in the evolution of Buddhological speculations?

(b) Give an account of the form of Buddhism envisaged in the Lalitavistara.

3. (a) Write a short dissertation on the literary excellences of the Lalitavistara and on the peculiarities of the language of its gāthā portion.

(b) What class of Buddhist literature is represented by the Lalitavistara? Name a few works which can be regarded as belonging to the same type as the Lalitavistara.

4. (a) Examine critically the value of the Lalitavistara as a biography of Buddha.

(b) Name the various sources which yield materials for the life of Buddha and ascertain the place of the Lalitavistara among them.

5. Translate into English :—

(a) यो बुद्धं चित्तमवर्तयद्भक्षो यो मारपाशैरवमुक्तमानसः ।

यस्याप्यवन्ध्याविह दशनश्रवास्त्ययान्ततः शान्तविमोक्षपारगः ॥

आलोक्यभूतं तमतुल्यधर्मं तमोनुदं सन्नयवेदितारम् ।

शान्तक्रियं बुद्धममेयबुद्धिं भक्त्या समन्ता उपसंक्रमध्वम् ॥

(b) स्त्रीभिस्तु सा परिवृता यथ देवकन्या

स्नातानुल्लिप्तप्रवराम्बरभूषिताङ्गी ।

तुर्यैसहस्रमनुगीतमनोज्ञघोषैः

आरुह्य देव्युपविशेष मरुत्सुषेव ॥

दिव्यैर्महार्थसुविचित्रसुरत्नपादैः

स्वास्तीर्णं पुष्पविविधैः शयने मनोज्ञे ।

शयने स्थिता विगलिता मणिरत्नचूडा

यथ मिश्रकावनगता खलु देवकन्या ॥

(c) सुजातजातशब्दाश्च श्रूयन्ते स्म । सर्वजनपदकर्मान्ताश्च समुच्छिन्ना अभूवन् । उत्कूलनिकूलाश्च पृथिवीप्रदेशाः समाः समवस्थिताः सर्ववीथीचत्वर-  
शृङ्गाटकरथ्यान्तरापणमुखानि च पाणितलमृष्टाणीव पुष्पामिकीर्णानि विरोचन्ते स्म ।  
सर्वाश्च गुर्विण्यः सम्यक्सुखेन प्रसूयन्ते स्म । सर्वशालवनदेवताश्च पक्षेज्वर्ध-  
कायानभिनिर्माय नम्यमानाः स्थिताः संदृश्यन्ते स्म ।

## SIXTH PAPER

*The questions are of equal value**Answer SIX questions only*

1. State, in your own words, the point of contention between Bhāvaviveka and Buddhapālita about the derivation of the word 'Pratītyasamutpāda.'

2. (a) Explain the Viparyāsa.

(b) Does Nāgārjuna admit the existence of Viparyāsa? Give reasons for your answer.

3. Give the gist of Nāgārjuna's reply to the argument contained in the following śloka :—

यदि शून्यमिदं सर्वमुदयो नास्ति न व्ययः ।

चतुर्णामार्यस्त्यानामभावस्ते प्रसङ्गते ॥

Or,

यदि शून्यमिदं सर्वमुदयो नास्ति न व्ययः ।

प्रहाणाद्वा निरोधाद्वा कस्य निर्वाणमिष्यते ॥

4. Write notes on :—

(a) 16 kṣaṇas, i.e., citta-kṣaṇas of darśanamārga ;

(b) Dharmatāniṣyandabuddha ;

(c) Tathāgatagarbha ;

and (d) Dharmakāya.

5. (a) Translate into English :—

इह हि भगवता महाकरुणोपायप्रज्ञाद्वयज्ञानधारिणा सकललैघातुकाशेष-  
सत्त्वजात्यादिदुःखव्युपशमैकमनसा त्रिभिः कल्पासंख्यौ यैः सप्तभिर्वा नैरन्तर्य-  
क्रमेणोद्गच्छता तैस्तैर्निरतिशयैरतिविचिलैः .. क्षितिसलिलज्वलनपवनसाधारण-  
भैषज्यमहामहीरुहवज्जनानां स्वेच्छात उपभोग्यतामात्मानमुपगमयता महाकाळेन  
सार्वज्ञं सर्वाकारपरिच्छेदिपदमधिगतम् ।

(b) Explain the following śloka in Sanskrit :—

विज्ञप्तिमात्रमेवैतदसदर्थवभासनात् ।

यथा तैमिरिकस्यासत् केशचन्द्रादिदर्शनम् ॥

यदि विज्ञप्तिरनर्था नियमो देशकालयोः ।

संतानस्यानियमश्च युक्ता कृत्यक्रिया न च ॥

6. Give some details about the date (or probable date) of the Masters of the Madhyamaka School, Nāgārjuna, Deva, Buddhapālita, Bhāvaviveka (or Bhāvaviveka) with an account of their works.

7. (a) Explain the Kārikā of Nāgārjuna :—

यः प्रतीत्यसमुत्पादः शून्यतां तं प्रवक्ष्ये ।

सा प्रज्ञसिद्धादाय प्रतिपत् सैव मध्यमा ॥

and state the relation between śūnyatā and pratītyasamutpāda.

(b) Has the Madhyamaka-philosophy, a theory of tattva contrasted with its theory of pratītyasamutpāda?

8. The Yogācāras maintain that the words of Bhagavat : *ādisāntā dharmāḥ prakṛtīparinirvṛtaḥ* refer to *parikalpitasvabhāva*. What is the meaning of this thesis?

9. Write short notes on :—

- (a) The probable origin of Yogācāra idealism (*attamātram idam sarvaṃ*).
- (b) The difference between *viññapti* and *viññāna*.

10. Explain the following śloka :—

- (a) न द्रष्टा न च द्रष्टव्यं न वाच्यो नापि वाचकः ।  
अन्यत्तु हि विकल्पोऽयं बुद्धधर्माकृतिस्थितिः ॥  
ये पश्यन्ति यथादृष्टं न ते पश्यन्ति नायकम् ।  
अप्रवृत्तिविकल्पश्च यदा बुद्धं न पश्यति ।  
अप्रवृत्तिभवे बुद्धः संबुद्धो यदि पश्यति ॥
- (b) धर्मपुद्गलनैरात्म्यं क्लेशज्ञेयं च ते सदा ।  
विशुद्धमानिमित्तेन प्रज्ञया कृपया च ते ॥  
न निर्वासि निर्वाणेन निर्वाणं त्वयि संस्थितम् ।  
बुद्धबोद्धव्यरहितं सदसत्पक्षवर्जितम् ॥

11. Relate the characteristics that have been attributed to the Śrāvaka-yānist and the Pratyekabuddhayānist in the Lankāvatāra.

### SEVENTH PAPER

*The questions are of equal value*

*Attempt ANY SIX questions*

1. Show how the very definition of reality as *arthakriyākāritva* (causal efficiency) leads as a matter of necessity to the doctrine of momentariness of things.

2. Discuss the importance of the school of Dinnāga in the history of Indian Logic.

3. Comment on the following :—

na sataḥ kāraṇāpekṣā vyomāder iva yujyate | kāryasyā'sambhavī hetuḥ  
kṣepuṣpāderivā'sataḥ |

4. Give a short dissertation on the doctrine of the Yogācāras, who denied the independent existence of exterior things (*bāhyābhāva*) with special reference to the theory of *sahopalambhaniyama*.

5. Fully discuss the definition of *Pratyakṣa* : 'Pratyakṣam kalpanāpoḍham abhṛāntam'. Do you think that the adjective 'abhṛānta' is absolutely necessary? Give reasons in support of your answer.

6. What is the meaning of *Kalpanāpoḍha* in Dinnāga's definition of *pratyakṣa*?

7. What is the nature of *manovijñāna* as in the *Nyāyabindu*? What do you think to be the logical necessity for postulating this type of perception?

8. What is the triple form of a valid reason? Discuss the logical necessity and relevancy of each of the forms.

9. Non-perception (*anupalabdhi*) is made the ground of inference of non-existence in the *Nyāyabindu*. Fully explain the relevancy and utility of this inference with special reference to the interpretation of Dharmottara.

10. Define *pakṣa*, *sapakṣa* and *vipakṣa* and give the reasons which have led Dharmakūṭi to think that the statement of *pakṣa* is not necessary in a syllogism.

Or,

Write a short interpretative discourse on the doctrine of *apoha* and the doctrine of *prasajyapratishedha*.

### EIGHTH PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

1. (a) Illustrate by short sentences the use of *any six* of the following :—

उत्, कामम्, किल, खलु, नाम, परम्, परितः and पुरस् ।

(b) Name and expound the *samāsa* in *any four* of the following :—

मध्याह्नः, उपगिरि, पद्मगन्धि, कृताकृतम्, कुशहस्तः and प्राप्तिदकः ।

(c) Decline *any five* of the following bases :—

ककुर्, nominative or locative singular; द्वार, nominative or genitive plural; वाग्मिन्, accusative or instrumental plural; शुचि, dative or locative singular in masculine; त्वि, nominative in feminine or genitive in masculine, and अदस्, dative singular in masculine or feminine.

(d) Conjugate the roots : तन् or गम्, perfect, third person plural; ब्रु or भ्रु, present, third person plural; हा or दा, imperative, second person singular; सिच् or दा, aorist, third person singular, and कृ or क्री, imperfect, third person plural ( परस्मैपद ).

(e) Account for the case-endings in the words underlined :—

पुष्पाणि स्पृहयति वने ; कुण्डलाय हिरण्यम् ; अभीती व्याकरणे ;  
साधुर्देवदत्तो मातरि ; यज्ञदत्तमभिक्षुष्यति ; विद्यया यशः ।

(f) Derive *any four* of the following and give their derivative meaning :—

पुरातन, वार्षिक, पौरुष, नरीनृत्यते and तिष्ठासति ।

(g) Join by sandhi *any three* of the following :—

पठन् तदः ; रामः उवाच ; ते आसन् and तव छाया ।

(h) Explain and illustrate by short sentences the use of the Infinitive or the Desiderative in Sanskrit. 5

(i) Rewrite the following, correcting errors : 10

ग्रामस्य पश्चिमस्यां दिशि अयं नद्यस्ति । ग्रामेऽधिवसमाना जना  
तस्य जलेऽवगाह्ति पाणिपादावौ प्रक्षालित्वा हरिमुपासन्ते ।

## SECOND HALF

Write an essay on one of the following subjects :— 50

(a) *Reality*, its character—especially as applied to the Goal in Buddhism.

(b) The doctrine of *Kāya*.

(c) The *Āryasatyas* as conceived by the Hīnayānists and the Mahāyānists.

(d) *Nirvāṇa*—points of agreement and difference in Hīnayāna and Mahāyāna.

## ARABIC

### INTERNAL EXAMINERS

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MAULVI A. AZIZ

DR. M. W. MIRZA

„ MUZZAM HUSSAIN

## (GROUP A.)

## FIRST PAPER

## FIRST HALF

*The questions are of equal value*

1. Describe briefly the origin and rise of the Lakhmite kingdom during the pre-Islamic period. Name three of its important rulers and discuss their character.

*Or,*

Describe briefly the rise of the Ghassanide power. Name three of the important rulers of the Ghassanide dynasty and discuss their character

2. Describe some of the important changes caused by Islam in the social life of the Arabs.

*Or,*

Describe briefly and discuss the services of Umar I to the cause of Islam.

3. 'The era of al-Walid was glorious, both at home and abroad, there is no other reign, not excepting even that of 'Umar in which Islam so spread abroad and was consolidated.'

Discuss the above statement.

*Or,*

Describe briefly the chief causes of the fall of the Umayyad dynasty, and discuss how it affected the future history of Islam.

## SECOND HALF

*Marks—50*

*Answer ANY THREE questions*

1. 'The 'Abbāsids came into power as the defenders of religion.' Discuss this statement.

2. State the origin and use of the word 'Wazir,' and estimate the value to the 'Abbāsids of some of the holders of this title. Mention some of the activities of Ibn Muqlah.

3. Was there in the 'Abbāsīd period any influence which could be termed reactionary or puritanical and which stabilised society, but also brought about some of the consequences of restriction of freedom of intellectual and emotional expression?

4. Mention the causes which led to the downfall of the 'Abbāsīd Empire. Would it be just to say that 'Arabism' was an obstacle in the way of imperialism?

5. 'The Umayyads of Spain very closely reproduced the characteristics of their rule in Syria; it is only under Murābit rule that we find the first beginnings of Western philosophy, and the line of transmission is from the Mu'tazilites of Baghdad through the Jews and thence to the Muslims of Spain.' Consider the historical significance of this remark.



## SECOND PAPER

## FIRST HALF

*The questions are of equal value*

*Attempt only THREE questions*

1. What are the chief characteristics of the Semitic languages as distinguished from others?
2. Enumerate some of the essential differences between the Hebrew and Arabic languages.
3. Classify the different Semitic languages, and indicate the principle on which you have based the classification.
4. Discuss the different theories with regard to the original home of the Semites.
5. Write notes on (a) Syriac, and (b) Ethiopic.

## SECOND HALF

*The questions are of equal value*

*Answer ANY THREE questions*

1. Describe and discuss the chief characteristics of pre-Islamic Arabian Poetry.
2. Write notes on the following :—  
Al-Faḥl, Mufaḍḍaliyat, Nābigha, Ḥamasa, khizānat-ul-Adab.
3. 'Under Walid, people talked of fine buildings, under Sulaiman of cookery and the fair sex, while in the reign of 'Umar-bin-'Abd-al-'Aziz the Qorān and religion formed favourite topics of conversation' justify.
4. Give a critical estimate of Ḥājjāj-bin-Yūsuf, with special reference to the development of Arabic literature under his protection.
5. Discuss the development of Ḥadīth literature.

## THIRD PAPER

*The questions are of equal value*

## FIRST PART

*Maximum Marks—60*

*FOUR questions are to be attempted, TWO of which should be from each group*

## GROUP A.

1. (a) Explain in English or Arabic :—

وجه العصر على الستة and ستة أنواع المنقول

Give examples of each.

- (b) What is المرتجل ? Mention its kinds with examples.

2. Give the grammatical rules for the use of Arabic numerals, and illustrate your answer with examples.

3. Enumerate and explain with examples the various kinds of الإعلام with which لام التعريف is used.

## GROUP B.

1. Define علم العروض and علم البديع . Give the various kinds of the former and examples of each.
2. Define الاستعارة and التشبيه , and distinguish between them. Illustrate your answer with examples.
3. Scan any two of the following and name the metre :—

(a) كل يوم يأتى برزق جديد  
 من مملك لنا غنى حميد  
 (b) عدل العواذل حول قلب التائه  
 و هوى الاحبة منه فى سردائه  
 (c) ستبدى لك الايام ما كنت جاهلا  
 و ياتيك باخبار من لم تزد

## SECOND PART

Maximum Marks—40

1. Translate into English any two of the following :—

(a) كان الوليد من افضل خلفاء بنى امية سيرة عند اهل الشام ، بنى الجوامع ، جامع دمشق ، و جامع المدينة على ساكنها افضل السلام ، و المسجد الاقصى ، و اعطى المجذمين و منعهم من سرال الناس ، و اعطى كل مقعد خادماً و كل ضرير قائداً و فتح فى خلافته فتوحاً عظماً منها الاندلس و كاشغر و الهند ، و كان شديد الكلف بالعمارات و الابنية و اتخاذ المصانع و الضياع ، و كان الناس يلتقون فى زمانه فيسأل بعضهم عن الابنية و العمارات و كان اخوه سليمان يحب الطعام و النكاح فكان الناس فى خلافته اذا التقوا سأل بعضهم بعضاً عن الطعام و النكاح ، و كان عمر بن عبد العزيز صاحب عبادة و تلاوة ، فكان الناس اذا تلاقوا فى ايامه سأل بعضهم بعضاً ما وردك الليلة ، و كم تحفظ من القرآن \*

(b) كان الرشيد من افاضل الخلفاء و نصعائهم و علمائهم و كرمائهم ' كان يحج سنة و يغزو سنة ، كذلك مدة خلافته الا سنين قليلة ، قالوا و كان يصلى فى كل يوم مئة ركعة و حج ماشياً ، و لم يحج خليفة ماشياً ، غيره و كان اذا حج حج معه مئة من الفقهاء و ابناؤهم و اذا لم يحج احج ثلثمائة رجل بالنفقة السابعة و الكسوة الظاهرة و كان يتشبه فى انعاله بالمنصور الا فى بذل الاموال ، فانه لم ير خليفة اسمع منه بالمال - و كان لا يضيع عنده احسان محسن و لا يؤخر و كان يحب الشعر و الشعراء ، و يميل الى اهل الادب و الفقه و يكره المرء فى الدين - و كان يحب المديح لا سيما من شاعر فصيح و يجزل العطاء عليه \*

(c) و اعلم ان الدولة الاولى فى الاسلام دولة لم تكن من طرز دول الدنيا ، و هى بالامور النبوية و الاحوال الاخرية اشبه ، و الحق فى هذا ان زيتها قد كان زى الانبياء و هديها هدى الارلياء و فتوحها فتح الملوك الكبار - فاما زيتها فهو الخشونة فى العيش و التقلل فى المطعم و الملبس ، كان احدهم يمشى فى الاسواق راجلاً و عليه القميص الخلق المرقوع الى نصف ساقه و فى يده درة ، فمن وجب عليه حد استوفاه منه - و كان طعامهم من ادنى اطعمة فقرائهم - ضرب امير المؤمنين عليه السلام المثل بالعسل و الخبز النقى - يقال فى بعض كلامه ، و لو شئت لاهتديت الى مصفى هذا العسل بلباب هذا البر - و اعلم انهم لم يقللوا فى اطعمهم و ملبوسهم فقرا و لا عجزوا عن افضل لباس و اشهى مطعم و لكنهم كانوا يفعلون ذلك مراساة لفقراء رعيته و كسرا للنفس من شهواتها \*

2. Translate into Arabic any two of the following :—

(a) 'I have not regarded any ancient with veneration on account of his antiquity nor any modern with contempt on account of his being modern.

I have taken an impartial view of both sides, I have given every one his due and amply acknowledged his merit. Some of our scholars pronounce a feeble poem to be good, because its author was an ancient, and include it among their chosen pieces. But they call a sterling poem bad, though its only fault is that it was composed in their own time or that they have seen its author.'

(b) It is not easy to characterize the religion of the Arabs before Islam. Worship of the sun, moon, and stars seems to have prevailed among them. We hear of idols to which temples were erected, and of trees and stones which were worshipped as holy. But we find little traces of it in their poems. It has been supposed that this is due to expurgation of such passages by Muslim revisers in after days. It is indeed possible enough that Allah has been substituted in many places for al-Lat. But all the changes, which we have to imagine are not of this simple character.

(c) 'My fellow Christians,' writes Alvaro, 'delight in the poems and romances of the Arabs. They study the works of Muhammadan theologians and philosophers, not in order to refute them, but to acquire a correct and elegant Arabic style. Alas! the young Christians who are most conspicuous for their talents, have no knowledge of any literature or language save the Arabic. They read and study Arabian books with avidity. They amass whole library of them at a vast cost, and they everywhere sing the praises of Arabian lore. On the other hand, at the mention of Christian books, they disdainfully protest that such works are unworthy of their notice.'

#### FOURTH PAPER

##### FIRST HALF

*The questions are of equal value*

*Answer ANY THREE questions*

1. Transtate into English :

ارونى امة عاشت وسادت \* على غير العظيم من المبادئ  
 او انبثمت وهمت فاستقلت \* بلا علم ولا عمل مجاد  
 اذا حرية الناس اضمحلت \* فقد رلى لهم اقوى عماد  
 و لم ار امة رلت سراها \* مرافقها فكانت للسداد  
 نيا قلبى اتقد عزما و حزما \* فانت المستقل او المفادى  
 تخر الراسيات و لا سيل \* الى هدم الكريم من اعتقادى  
 و كيف اهاب امامت حيا \* وكيف اعيش ان ماتت بلادى

2. Trace the origin and development of modern Arabic literature in Egypt and Syria.

8. Reproduce in your own Arabic what Khalil Matran says about Abu Shadi's poetry.

4. Explain the following lines :

وطنی لو صبرت فی ابعد عنه \* مثلث آية بحسی و لمسی  
 وطنی لو عدته اقسى الاعادی \* ما تعدت على یقینی و حدسی  
 وطنی لو دعیت ان افتدیه \* ما تمنیت غیر تخلید رمسی  
 وطنی لو سئلت فی البعث عنه \* شمتہ ضاحکا بجنات قدس  
 وطنی مفزعی انا منه بعض \* کیف انساه وهو اصلی راسی  
 کیف ارثیه وهو رغم التنامی \* ملهی ' منعشی ' غفور لیاسی

5. Give, in your own Arabic, the character of حماد as set out by the author of فتاة غسان, and compare it with that of ثعلبه.

## SECOND HALF

*The figures in the margin indicate full marks*

1. Write an essay on any one of the following subjects :—

50

- (i) The position of Arabic among the Semitic languages.
- (ii) Baghdad in the days of Harun-al-Rashid.
- (iii) The Spirit of pre-Islamic Poetry.
- (iv) Spanish Arabs and the institution of Chivalry.
- (v) Compilation of the Hadith.

## FIFTH PAPER

### FIRST HALF

*The questions are of equal value*

*Answer ANY THREE questions*

1. Translate into English, adding explanatory notes on the underlined words :—

واني كفاني فقد من ليس جازيا  
 بحسنى و لا فى قربه متعليل  
 ثلاثة اصحاب فؤاد مشيع  
 و ابيض اصليت و صفراء عيطل  
 هتوف من الملس المتون يزيناها  
 رصائع قد نيطت اليها و محمل

اذا زل عنها السهم حنت كانها  
 مرزاة عجلى ترن و تعـوـن  
 غشى سرامه  
 مجدعة سقبانها و هى بهل  
 و لا جبا اكهى مرب بعـرسه  
 يطالعهـا فى شانه كيف بفعل  
 و لا خرق يهتق كان فؤاده  
 يظل به المكاه يعلو ويسفل  
 و لا خالف دارية متغزل  
 يروح و يغدر داهنا يتكحل

2. Write down an appreciation of شنفرى as a representative of the school of pre-Islamic Arab poets.

3. Translate into English :—

يمينا لنعم السيدان وجدتما  
 على كل حال من سحيل و مهـرم  
 تداركتما عبسا و ذيبان بعد ما  
 تفانوا و دقوا بينهم عطر منشم  
 وقد قلتما ان ندرك السلم و اسعا  
 بمال و معروف من القول نسلم  
 فاصبحتما منها على خير مرطن  
 بعيدىن فيها من عقوق و مائـم  
 عظيمين فى عليا معد هديتما  
 و من يستبح كنزا من المجد يعظم  
 فاصبح يهدى فيهم من تلادكم  
 مغانم شتى من افال مزلم  
 تعفى الكلوم بالمئين فاصبحت  
 ينجمها من ليس فيها بمحرم

4. What are the chief merits of the Mu'allaga of Zuhair? Discuss fully in your own Arabic.

5. Give an estimation of Zuhair as a poet of the Jāhilliya, and illustrate your remarks by apt quotations from his Mu'allaga.

### SECOND HALF

*All questions carry equal marks. Attempt THREE questions only of which Question No. 1 should be one.*

1. Explain in Arabic or English :—

(a) فرحت بما خبرت عن سيدكم  
 و كانا امرأين كل امرهما يعلو  
 رأى الله بالاحسان ما فعلا بكم  
 فابلاهما خيرا البلاء الذي يبلوا  
 تداركتما الاحلاف قد ثل عرشها  
 و ذبيان قد زلت باقدامها النفل  
 فاصبحتما منها على خير موطن  
 سبيلكما فيها و ان احزنو سهل  
 (b) الم تر للنعمان كن بنجوة  
 من الشر لو ان امرأ كان ناجيا  
 فغير منه ملك عشرين حجة  
 من الدهر يوم واحد كان غاريا  
 فلم ار مسلوبا له مثل ملكه  
 اقل صديقا بازلا او مواسيا  
 فابن الذين كان يعطى جياته  
 بارسانهن و الحسان الغواليا  
 و ابن الذين كان يعطيهم القرى  
 بغلاتهن و المئمن الغراويا  
 و ابن الذين يحضرون جفانه  
 اذا قدمت القوا عليها المراسيا

## 2. Translate into English :—

أَنْ الْخَلِيطَ اجْدَ الْبَيْسَ فَانْفَرَقَا  
 وَ عَلَّقَ الْقَلْبُ مِنْ أَسْمَاءَ مَا عُلِقَا  
 وَفَارَقْتُكَ بِرَهْنٍ لَانْفَالِكَ لَهُ  
 يَوْمَ الْوَدَاعِ فَاَمْسَى الرِّهْنُ قَدْ عُلِقَا  
 وَ اخْلَفْتُكَ ابْنَةَ الْيَكْرَمِيِّ مَا وَعَدْتُ  
 فَاَصْبَحُ الْكَهْلُ مِنْهَا وَ هُنَا خُلِقَا  
 قَامَتْ تَرَا أَمَى بَذَى ضَالٍ لَتَحْزُنُنِي  
 وَ لَا مَحَالَةَ أَنْ يَشْتَاقَ مِنْ عَشَقَا  
 بِجَيْدٍ مَغْزُولَةٍ إِدْمَاءَ خَاذِلَةٍ  
 مِنْ الذَّبَابِ تَرَا عَى شَادَنَا خُرَقَا  
 كَانَ رِيْقَتَهَا بَعْدَ الْكُرَى اغْتَبَقْتُ  
 مِنْ طَيْبِ الرَّاحِ لَمَّا يَعْدُ أَنْ عُلِقَا  
 شَجَّ السَّقَاةَ عَلَى نَاجِدِهَا شَبَمَا  
 مِنْ مَاءِ لَيْلَةٍ لَا طَرَقَا وَ لَا رَنَقَا

## 8. Comment upon the sentiments expressed in the following lines :—

(a) وَ نَسَى نِعْمَةً تَمَمَّتْهَا وَ شَكَرُهَا  
 وَ خَصِمٌ يَكَادُ يَغْلِبُ الْحَقَّ بَاطِلُهُ  
 دَفَعْتُ بِمَعْرُوفٍ مِنَ الْقَوْلِ صَائِبٍ  
 إِذَا مَا اضْطَلَّ الظُّلُ طَائِقِينَ مَفَاصِلُهُ  
 (b) كَانِي وَ قَدْ خَلَفْتُ تَسْعِينَ حِجَّةً  
 خَلَعْتُ بِهَا عَنْ مَتَكَبِّي رَدَائِيَا  
 بَدَالِي أَنِّي لَسْتُ مَدْرَكُ مَا مَضَى  
 وَ لَا سَابِقَا شَيْئَا إِذَا كَانَ جَالِيَا  
 إِرَانِي إِذَا مَا شُدَّتْ لَاقِيَتُ آيَةً  
 تَذَكَّرُنِي بَعْضُ الَّذِي كُنْتُ نَاسِيَا



(c) ستأتى آل حصن حيث كانوا  
 من المثلثات باقية ثناء  
 فلم ار معشراً اسروا هدياً  
 و لم ار جار بيت يستبأ  
 و جار البيت و الرجل المفادى  
 امام الحى عقدهما سواء

4. Criticise :—

”اطبق علماء الشعر و اهل الادب على انه ( اى زهير ) احد  
 الشعراء الثلاثة المفضلين على من سواهم من شعراء الجاهلية“ \*

5. Discuss :—

‘Zuhair is the most religious of the pre-Islamic poets.’

#### SIXTH PAPER.

#### FIRST HALF.

*The questions are of equal value.*

*Attempt ANY THREE questions.*

1. Give a critical estimate of at-Tughhrā'i and state what led him to the composition of the Lāmiyyat-ul-'Ajām.

2. Who other than at-Tughhrā'i have attempted Lāmiyya poems? Discuss the subject matters of each.

3. Write explanatory notes on the following :—

— الرسيم — الغيل — الغيل — انضاء حب — نعل — اضم

حلية الفضل — الجزع — الانيق — شروط

4. Explain in Arabic either of the two following passages :—

(a) تلام على و عين النجم ساهرة  
 و تستحيل و صبغ الليل لم يحل  
 فهل تعين على غى هممت به  
 و الفى يزجر احيانا من الفشل

انى اريد طردق العى من اضم  
وقد حمته رماه العى من نعل  
فسر بذنا فى ذمام الليل معتسفا  
فنفحة الطيب تهدينا الى الحل

Or,

(b) ملك القناعة لا يخشى عليه ولا  
يحتاج فيه الى الانصار و الخول  
ترجو البقاء بدار لاثبات لها  
فهل سمعت بطل غير منتقل  
و يا خبيرا على الاسرار مطلعا  
اصمت فغى الصمت منجاة من الزلل  
قدر شعورك لامر ان فطنت له  
فاربأ بنفسك ان ترى مع الهمل

## SECOND HALF

*The figures in the margin indicate full marks*

1. Write in Arabic a critical note on the life and work of Muslim 10  
b. al-Walid.

Or,

Comment on the following remark :—

”كان مسلم بن الوليد جيد القول فى الشراب وكثير من  
الرواة يقرنه بابى نواس فى هذا المعنى “ \*

2. Translate into English any two of the following passages, adding 20  
explanatory notes where necessary :—

A.

لو كان ما بى مثل ما بك لم ابت  
ندمان احزان صديق كواكب  
شاب الهوى فى القلب واحتلك الجوى  
اسفا و ما شمل المشيب ذرائى  
ثوبى على لى انفس كربة  
فاذا بدالك فى الذنوب فعاتبى

B.

إذا دعيت الى لهو اجبت ر ان  
 لم ادع للهو ر اللذات لم أجب  
 وشادن قال هالك الكاس قلت له  
 هات اسقنى من نتاج الماء والعنب  
 فقام يسعى الى دن فسلها  
 حمراء بكرها لها عشر من لحقوب

C.

تأتى عطاياه شتى غير واحدة  
 مؤملية ر ان كانوا على بعد  
 كحملة السيل تأتى بعد عشرة  
 له قراقير بالاذنى ر الزبد  
 \* يمنع العرف من الحاح طالبه  
 ر لا يقرب منه رفق متئد

8. Summarize in your own Arabic *any two* of the following passages fully, bringing out the meaning intended by the poet to be conveyed to the reader :- 20

A.

كتاب فتى اخى كلف طروب \* الى خو، مذممة لعروب  
 صبوت اليك من حزن و شوق \* وقد يصبو المعصب الى الحبيب  
 وقد كانت تجيب اذا كتبنا \* فياسقيا ورعيا للمجهب  
 تخط كتابها بقضييب رند \* ومسك كالمداد على القضيب  
 كتاب فيه كم دالى وما ان \* اقضى من رسائلها عجيبى  
 نعميه على ذى الجهل عمدا \* ولا يخفى على الفطن اللبيب

B.

كانت ذخيرة دهقان يضنى بها  
 مسكوبة من حلال غير مكتسب  
 يدعى اباه ر يغذاها فباعها  
 من ابنة صيرها غذية لأب

كانما ضمنت مسكا تفروح به  
 ارعبر الهند ار طيبا من السخب  
 تكاد ان تتلاشى كلما مزجت  
 فى الكس لولا بقايا الريم والعيب  
 ممية لهموم القلب محيية  
 للبشر نافية للفكر و الرعب  
 يسعى بها مخطف الاحشاء مختلق  
 قد تم فى حسن تركيب و فى ادب  
 C.

وقفت على النهج الظنون فصرحت  
 و ادى اليك الحكم كل مشرد  
 اذا اختلفت اهواء قوم جمعتهم  
 على العفو ارحم العسالم المهند  
 اذا انبحروا جلى بعوف عليهم  
 و ان اصحروا كانوا فريسة مرصد  
 بكل سبوح فى العجاج كأنما  
 تكنف عطفها جناحا خفيدة  
 اذا هن غامسن السدجا بغنيمية  
 قسمن السرى فى كل سهل واجلد  
 كان اكف القوم مثنى و مرصد  
 تعاطين جاديا على ظهر قرمد

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

1. Give a brief sketch of the life of Ibn Qudāma, and describe his services to Arabic literature.

Or,

Give a critical estimate of the نقد الشعر as a work on the criticism of Arabian poetry.

2. Explain fully according to Ibn Qudāma :—

”لما كانت فضائل الناس من حيث انهم ناس لا من طريق ما هم مشتركون فيه مع سائر الحيوان على ما عليه اهل الالباب من الاتفاق فى ذلك انما هى العقل و الشجاعة والعدل والعفة كان القاصد لمدح الرجال بهذه الاربع الخصال مصيبا والمادح بغيرها مخطئاً“ \*

Or,

Describe النسيب and give its essentials according to Ibn Qudāma.

8. Explain fully and give the points of illustration in any two of :—

(a) ولقد دخلت على الفنا \* في الغدير في اليوم المطير  
الكاعب الحسناء ترفل \* في الدمقس و في الحرير  
فدفعتها فتدافعت \* مشى القطة الى الغدير  
و عطفتها فتعطفت \* كتعطف الغصن النفير  
و لثمتها فتنفست \* كتنفس الظى الغرير  
(b) و تلك هيكله خرد مبتلة

صفراء رعبلة في منصب سنم  
عذب مقبلها جذل مخلصها  
كالدعص اسفلها مخضدة القدم  
سود ذرائبها بيض ثرائبها  
محض ضرائبها صيغت على الكرم  
عبل مقيدها حال مقلدها  
بض مجردها لفاء في عم  
سمم خلائقها درم مرافقها  
يروى معانقها من بارد الشيم  
(c) من يلق يوما على علاته هرماً  
يلق السماحة منه والنوى خلفا  
ليث بعثر يصاد الرجال اذا  
ماكذب الليث عن اقارنه صدقا

يطعنهم ما ارتموا حتى اذا طعنوا  
ضارب حتى اذا ما ضاربوا اعتنقا  
فضل الجود على الخيل البطاء فلا  
يعطى بذلك ممنونا ولا نرقا  
لر نال حى من الدنيا بمكرمة  
افق السماء لذالت كفه الافقا

4. Explain and criticise, according to Ibn Qudāma, any three of :—

- (a) لنا الجففات الغريلمعن بالضحى  
ر اسيافنا يقطرن من نعدة دما  
(b) تلوذ تعالب الشرفين منها  
كما لان الغريم من التببيع  
(c) تقعقع فى الاباط منها وفاضها  
خلت غير آثار الارجيل ترمى  
(d) يودّ بان يمسى سقيما لعلها  
اذا سمعت عنه بشكوى تراسله  
ويهتزل للمعروف فى طلب العلى  
للعهد يوماً عند ليلى شمائله

## SECOND HALF

Answer ANY THREE questions

1. Give a brief sketch of the life of Ibn Qutayba and discuss the merit of his contribution to Arabic literature.

2. Describe and discuss the four kinds of poetry according to Ibn Qutayba and illustrate them with examples.

3. Translate into English any two of the following :—

- (a) ر للشعر قارات يبعد فيها قريده ر يستصعب فيها رضىه  
و كذلك الكلام المنثور فى الرسائل ر المقامات ر الجوابات  
فقد يتعذر على الكاتب الاديب ر على البليغ الخطيب  
ولا يعرف لذلك سبب الا ان يكون من عارض يعترض

على الغريزة من سوء غذاء او خاطر غم - وكان الفرزدق يقول  
 انا اشعر تميم ، و ربما اتت على ساعة و نزع ضرر اسهل  
 على من قول بيت - و للشعر اوقات يسرع فيها اتيه و يسمع  
 فيها آيته ، منها اول الليل قبل تغشى الكرى ، و منها صدر  
 النهار قبل الغداء ، و منها يوم شرب الدواء ، و منها الخلوة  
 فى العبس ، و المسير - و لهذه العلل تختلف اشعار الشاعر  
 و رسائل الكاتب \*

(b) قال ابريز لكاتبه فى تنزيل الكلام ، انما الكلام اربعة ،  
 سؤالك الشئ ، و سؤالك عن الشئ ، و امرك بالشئ و  
 خبرك عن الشئ ، فهذه دعائم المقالات ان التمس اليها  
 خامس لم يوجد و ان نقص منها رابع لم تتم ، فاذا طلبت  
 فاسجع ، و اذا سألت فارض ، و اذا امرت فاحكم ، و اذا اخبرت  
 فعقق - و قال ايضا : و اجمع الكثير مما تريد فى القليل مما  
 تقول ، يريد الایجاز ، و هذا ليس بمحمود فى كل موضع و لا  
 بمختار فى كل كتاب ، بل لكل مقام مقال ، و لو كان الایجاز  
 محمودا فى كل الاحوال لجرده الله فى القرآن و لم يفعل الله  
 ذلك ، ولكنه اطال تارة للتوكيد ، و حذف تارة للایجاز ، و كرر  
 تارة للفهام ، و علل هذا مستقصاة فى كتابنا المؤلف فى تاريل  
 مشكل القرآن \*

(c) و الالف مع اللام التى للتعريف اذا دخلت عليها لام الجاء  
 حذفها ، فقلت هذا للقوم و للغلام و للناس ، فان ادخلت عليها  
 باء الصفة لم تحذفها ، فكتبت بالقوم و بالغلام و بالناس فان  
 جاءت الف و لام من نفس الحرف ليستا للتعريف فكتبت  
 نحو الالف و اللام اللتين فى التقاء و التفات و التباس ثم  
 ادخلت عليها لام الصفة او باء الصفة اثبت الالف نحو قولك  
 بالتقائنا و بالتفاتنا و بالتباس الامر على و بالتباسه لانهما من

نفس الامر و ليستا زائدتين فان ادخلت الف و اللام الزائدتين للمعرفة على الالف و اللام اللتين من نفس الحرف و لم تصل الحرف بباء الصفة و لا لام الصفة لم تحذف شيئاً فكتبت الالتقاء و التفتات و التباس ، فان وصلتها بباء الصفة لم تحذف فكتبت بالالتقاء و بالالتفات و بالالتباس ، فان وصلت بلام الصفة حذفت فكتبت للالتقاء و للالتفات و للالتباس \*

4. Describe according to Ibn Qutayba the duties of a كاتب as such.

5. Explain any ten of the following :—

(a) اشفار العين \*

(b) الربيع \*

(c) الاعجمى و العجمى ، و الاعرابى و العربى \*

(d) طعنه فجدله \*

(e) التومة \*

(f) العترة \*

(g) ألا ايها الركب النيام الا هبوا

اسالكم هل يقتل الرجل الحب

(h) من السم جوالا كان غلامه

يصرف سبدا في العنان عمردا

(i) زوجك يا ذات الثنا بالغر

الرتلات و الجبيين العر

(j) و النفس راغبة اذا رغبته

و اذا ترد الى قليل تقنع

(k) خطاطيف حجن في حبال متينة

تمد بها ايد اليك نوازع

(l) يا تملك تملى صلينى و ذرى عدلى



## EIGHTH PAPER

## FIRST HALF

*The figures in the margin indicate full marks*

1- Translate into English any one of the following, adding explanatory notes where necessary :— 15

A.

لا والله بل نتوازن فى المقال وزن المئقال و نتعاضى  
الفعال حذو النعال حتى نأمن التغابن و نكفى التضامن  
والا فلم اعلمك و تعلمنى و اقلك و تستقلنى و اجترح لك  
و تجرحنى و اسرع اليك و تسرحنى و كيف يجتلب انصاف  
بضيم و انى تشرق شمس مع غيم و متى اصعب رد  
بعسف و اى حر رضى بخطة خسف والله اذ يقول -

جزيت من اعلق بى رده \* جزاء من يبلى على اسه  
و كنت للخل كما كال لى \* على رفاء الكيل او بخسه  
فاهجر من استغباك هجر القلى \* و هبه كالملاحود فى دمه

B.

مخين احرز العين فى صرته بوقت اسارير مسرته و قال  
لى جزيت خيرا عن خطى قدميك والله خليفتى عليك -  
فقلت اريد ان اتبعك لا شاهد ولدك النجيب و انافه  
لكى ما يجيب فنظر الى نظرة الخادع الى المخدوع وضعك  
حتى تغر عزت مقلته بالدموع ثم انشد -

يا من تظنى السراب ماء لما رويت الذى رويت  
ما خلت ان يستسر مكرى و ان يخيل الذى عنيت  
والله ما برة بعرسى و لا لى ابن به اكنيت  
و انما لى فنون سحر ابدعت فيها و ما اقتديت  
لم يحكما الا صمعى فيما حكى و لا حاكما الكميت

2. Write explanatory notes on the following :—

10

ابو عبادة البحتري - قدامة - حاطب ليل - التبيان -  
البيان - نفخت في غير ضرر - خضراء الدمن - الاعواد  
المثمرة - عام هياط و مياط - عوذهما بالمثنائي -

3. Discuss the merits and demerits of the Maqamāt of Hariri. 10

4. Give a critical estimate of the life of حريري and compare his 15  
مقامات with that of بديع الزمان .

## SECOND HALF

Answer ANY THREE questions

Marks—50

1. Translate the following into English, adding notes where necessary :—

فقال له صاحبه اننى اسمى الليلة مع امير المؤمنين  
فهل تحسن ان تحذر . قال لا ولكنى استعمل حذاء .  
قال فان منزلى بهذا منزل امير المؤمنين فان وافقت منه  
طيب نفس ارسات اليك . ومضى الى عبد الملك فلما  
راه طيب النفس ارسل الى ابن مسجم واخرج راسه  
من وراء شرف القصر ثم حذا -

اذلك يا معاذ يا ابن الفضل  
ان زُلزل الاقدام لم تزلزل  
عن دين موسى والكتاب المنزل  
تقيم اصدام القرون الميل  
للحق حتى ينتهوا للاعدل

فقال عبد الملك للقرشى من هذا . قال رجل حجازى  
قدم على . قال احضروا فاحضروا وقال له اُحْدُ مجدداً . ثم  
قال له هل تغنى غناء الركبان . قال نعم . قال غنّه فتغنى  
فقال له فهل تغنى الغناء المتقن \*

2. Explain carefully the meaning of the following :—

قال ثم من اشعر العرب قال والله لحسبك بى عند  
رغبة او رهبة اذا رفعت احدى رجلى على الاخرى ثم  
عودت فى اثر القوافى عواء الفصيل الصادى ..... و مضى  
الحطيئة لوجهه الى عتيبة بن النحاس العجلي فسأله فقال له  
ما انا على عمل فاعطيك من عدده ولا فى مالى فضل  
عن قومي . قال له فلا عليك وانصرف . فقال له بعض  
قومه لقد عرضتنا ونفسك للشر . قال وكيف . قالوا هذا  
الحطيئة هو هاجينا اخبث هجاء فقال ردوه فردوه اليه فقال  
له لم كتمتنا نفسك كانك كنت تطلب العلل علينا اجلس  
فلك عندنا ما يسرك فجلس فقال له من اشعر الناس  
قال الذى يقول -

و من يجعل المعروف من دون عرضه  
يفره و من لا يتقى الشتم يشتم

فقال له عتيبة ان هذا من مقدمات افاعيك \*

What significance attached to *Satire* among the tribes? Would you make *Satire* the first development of tribal poetry?

3. Render the meaning of the following in your own Arabic :—

فقال له قيسبة هل لك فى مائة ناقة حمراء قال  
ما احوجنى الى ذلك قال فانخ فاناخ ثم قال له امعك  
سكين قال نعم قال ارفع لى عن رحلك فرفع له عن رحله حتى  
بدت خشبة موخره فكتب عليها قيسبة بالمسند و ليس  
يكتب به غير اهل اليمن -

بلغا كدّة الملوك جميعا	حيث سارت بالاكرومين الجمال
أن ردوا العين بالخميس عجا لا	واصدروا عنه و الروايا ثقال
هزئت جارتى وقالت عجيباً	اذ رأتنى فى جيدي الاغلال
ان ترينى عارى العظام اسيرا	قد برانى تضعع و اختلال
فلقد اقدم الكتيبة بالسيف	على السلاح و السربال

State in English what you know of the origin and currency of *Musnad* script. Write a note on بلغا and on Banu Kindah.

4. Render the meaning of the following in your own Arabic:—

فلما دعى به ربط الصبيان ثيابهم بثيابه فلما نظر هشام اليهم  
اغرورقت عيناه و استعبر و هم يقولون يا اميرالمومنين  
استجار بقبر ابينا و قد مات حظه من الدنيا فاجعله هبة له  
ولنا و لا تفضعنا فيمن استجار به فبكى هشام حتى انتخب  
ثم اقبل الكميت فقال له يا كميت انت القائل -

و ان لا تقولوا غيرها تتعرفوا  
نواصيها تردى بنا دهى شرب  
فقال لا والله و لا اتان من اتان العجاز وحشية \*

Write in English notes on the rights of sanctuary, and on the extent to which Makkah was affected as a centre of the cultivation of the arts after the introduction of Islam.

5. Translate the following into English and add notes where necessary:—

و انا للتذاكر الفرزدق و نقول ليت شعري ما صنع  
اذ طلع علينا فى حلة اُفواف يمانية موشاة قد ارخى غديرتيه  
حتى جلس فى مجلسه بالامس ثم قال ما فعل الانصارى .  
قال فنلنا منه و شتمناه . فقال قاتله الله ما منيت بمثله  
و لا سمعت بمثل شعره فارتكما و اتيت منزلى فاقبلت  
اصعد و اصوب فى كل فن من الشعر فلكأنى مفعم او لم  
اقل شعرا قط حتى اذا نادى المنادى بالفجر رحلت ناقتى  
واخذت بزمامها حتى اتيت ذبابا ثم ناديت باعلى صوتى  
أخاكم (يعنى شيطانه) فجاش صدرى كما بجيش المرحل  
فعقلت ناقتى و توسدت ذراعها فما قمت حتى قلت مائة  
بيت من الشعر و ثلاثة عشر بيتا فانشد قوله -

عزفت باعشاش و ماكنت تعزف  
واكترت من حدراء ماكنت تعرف

و لـجّ بك الهجران حتى كأنما  
 ترى الموت فى البيت الذى كنت تألف  
 حتى بلغ الى قوله \*  
 ترى الناس ما سرنا يسرون خلفنا  
 وان نحن أو مانا الى الناس وقفوا

Was al-Farazdaq a true representative of his period ? Can his poetry be characterized as 'great' ?

(OLD SYLLABUS)

*The questions are of equal value*

FIRST PAPER

*Answer the FIRST question and ANY TWO of the rest*

FIRST HALF

1. Explain the following in simple Arabic, adding notes where necessary :—

ولكن بالعواصم من عدى امير لا يكلفنا السوالا  
 اذا خفقت لمغربها الثريا توقت من اسنته اغتياالا  
 ولو شمس الضحى قدرت لعادت مشرقة اذا رأت الزوالا  
 فقل لمجيلها فوق الا عدى اذا مالم يجد فرس مجالا

2. Translate into English :—

و لو لا خراط حبك ما ازدهانى  
 الى المدح الطريف و لا التلاد  
 تورى عنك السنة الليالى  
 كانك فى ضمائلها اعتقاد  
 فان يكن الزمان يريد معنى  
 فانك ذلك المعنى المراد  
 بكاد محين لاقى المنايا  
 بسيفك لا يكون له معاد

8. Explain the following in Arabic or English, adding grammatical notes where necessary :—

و ما الدهر الا دولة ثم هولة  
و ما العيش الا صعة و سقام  
زمان قررا بالمشرقى ضيرونهم  
مالك قوم و الكماة صيغام  
و لودامت الدولت كانوا كغيرهم  
رعايا ولكن ما لهم دوام

4. Give a short account of the author of سقط الزند in Arabic or English, expressing his religious views and estimating his position as a poet.

5. Explain the following in simple Arabic or English, adding explanatory notes on the words underlined :—

نشان مع النعم بكل در      فقد الفت نتائجها الرثالا  
و لما لم يسابقهن شيء      من العيوان سابقن الظلالا  
ترى اعطائها ترمي حميما      كاجنحة البزة رمت نسالا

## SECOND HALF

Only THREE questions should be attempted

1. Translate into English, adding explanatory notes where necessary :—

خذول تراعى ربيا بخميلا      تنارل اطراف البرير و ترتدى  
و تبسم عن المي كان مغورا      تخلل حر الرمل دعص له ندى  
سقته اياة الشمس الا لثامه      اسف و لم تكدم عليه بائمد  
و ما الحرب الا ما علمت ذقتم      و ما هو عنها بالحديث المرجم  
متى تبعثرها تبعثرها ذميمة      و تضربى اذا اضريتموها فتضرم  
فتعركم عرك الرعى بئفاله      و تلقح كشافا ثم تفتج فتتأم

2. Explain with reference to the context :—

(١) يميننا لنعم السيدان و جدتما  
على كل حال من سحيل و مبهم  
(٢) ابا هند فلا تعجل علينا  
و انظرنا نخبرك اليقيننا

(٣) اليكم يا بنى بكر اليكم  
الما تعرفوا منا اليقيننا

(٤) ان اخواننا الراقم يغلزون  
علينا فى قيلهم احفوا

(٥) ايها الناطق المرتش عنا  
عند عمرور هل لذك بقاء  
لا تخلنا على غراتك انا  
قبل ما قدوشى بنا الاعداء

3. Explain in Arabic :—

تداركتما عبسا و ذيبان بعد ما  
تفانوا و دقوا بينهم عطر منشم  
وقد قلتما ان تدرك السلم واسعا  
بمال و معروف من القول نسلم  
فاصبحتما منها على خير موطن  
بعيدين فيها من عقوق و مائم  
عظيمين فى عليا معد هديتما  
و من يستبح كنزا من المجد يعظم  
تعفى الكلوم بالمئين فاصبحت  
ينجمها من ليس فيها بمجرم  
ينجمها قوم لقوم غرامة  
و لم يهريقوا بينهم ملء محجم

4. Translate into English and comment on :—

كريم يردى نفسه فى حياته  
ستعلم ان متنا غدا اينا الصدى  
ارى قبر نعام بخيل بماله  
مقبر غوى فى البطالة مفسد

ترى جثوتين من تراب عليهما  
 صفائح من من صفيح منضد  
 ارى الموت يعتام الكريم و يصطفى  
 عقيلة مال الفاحش المتشدد  
 ارى العيش كنز انا قضا كل ليلة  
 و ما تنقص الايام و الدهر ينفد  
 لعمرك ان الموت ما اخطأ الفتى  
 لكالطربل المرخى و ثنياء باليد

5. Describe and discuss the special features of the Muallaqat of any two of the following poets :—

زهير - طرفة - عمرو بن كلثوم

(OLD SYLLABUS)

SECOND PAPER

FIRST HALF

*The figures in the margin indicate full marks*

1. Translate into English either A or B :—

10

A.

فتغير لون ابي العباس و اخذه زمع و رعدة فالتفت  
 بعض ولد سليمان بن عبد الملك الى رجل منهم  
 و كان الى جنبه فقال قتلنا و الله العبد ثم اقبل  
 ابو العباس عليهم فقال يا بني الفراعلى ارى قتلاكم  
 من اهلى قد سلفوا و انتم احياء تتلذذون فى الدنيا  
 خذوهم فخذتهم الخراسانية بالكافر كروبات فاهمدا و الا  
 ما كان من عبد العزيز بن عمر بن عبد العزيز فانه  
 استجار بداؤن بن على و قال له ان ابي لم يكن  
 كآبائهم و قد علمت صنيعة اليكم فاجاره و استرهبه



من السفاح و قال له قد علمت يا امير المؤمنين  
ضيع ابيه الينا فوهبه له و قال له لا تربني وجهه  
و ليكن بحيث تأمنه و كتب الى عماله فى الفواحى  
بقتل بنى امية \*

B.

فاما خبر ابراهيم بن المهدي مع ابي سعيد مولى  
قائد الذي قلنا انه يذكر ههنا فاخبرني به الحسين  
بن على قال سمعت ابراهيم بن المهدي يقول كنت  
بمكة فى المسجد الحرام فاذا شيخ قد طلع و قد  
قلب احدى نعليه على الاخرى و قام يصلى فسالت  
عنه ف قيل لى هذا ابو سعيد مولى قائد فقلت لبعض  
الغلمان احصيه فحصبه فاقبل عليه و قال ما يظن احدكم  
اذا دخل المسجد الا انه له فقلت للغلام قل له يقول  
لك مولاي بلغنى فقال ذلك له فقال له ابو سعيد  
من مولاك حفظه الله قال مولاي ابراهيم بن المهدي  
فمن انت قال انا ابو سعيد مولى قائد و قام فجلس  
بين يدي و قال لا والله بابى انت و امى ما عرفتلك  
فقلت لا عليك \*

2. Explain the following in Arabic :—

15

لم أنس سلمى و لا ليالىنا      بالعزن اذ عيشنا بها ورغد  
اذ نحن فى ميعة الشباب و اذ      ايامنا تلك غضة جدد  
نحسد فيها على النعيم و ما      يولع الا بالنعمة العسد  
ايام سلمى غريرة انف      كأنها خوط بانة رؤد  
و يعى غدا ان غدا على بما      اكراه من لوعة الفراق غد

3. 'Kitab-ul-Aghani is the final resource of the students of belles-lettres, and leaves him nothing further to desire.' Discuss.

4. Give a short account of the life and career of طريم as 10

described by ابر الفرج الاصمغانى

## SECOND HALF

*The questions are of equal value.*

1. Translate into English and explain the overlined allusions :—

لكن هذا الخلق النفيس ليس يساعده الكيس و هذا  
الطبع الكريم ليس يحتمله الغريم و لا قرابة بين الذهب و  
الأدب فلم جمعت بينهما و الأدب لا يمكن ثرده فى قصعه  
و لا صرفه فى ثمن سلعه - و لى من الأدب نادرة جهدت  
فى هذه الايام بالطباخ أن يطبخ لى من جيمية الشماخ لونا  
فلم يفعل و بالقصاب أن يسمع أدب الكتاب فلم يقبل و  
أنشدت فى الحمام ديوان أبى تمام فلم ينفذ و دفعت الى  
الحمام مقطعات اللجام فلم يأخذ - و احتيم فى البيت الى  
شئى من الزيت فأنشدت من شعر الكميث ألفا و مائتى  
بيت فلم تغن - و لودعت ارجوزة العجاج فى توابل السكبا  
ما عذمتها عندي و لكن ليست تنفع فما أصنع \*

2. Translate into simple English :—

انما نحن الى الآجال نغدو و نروح  
فأسقنيها مثل ما يلقطه الديك الذبيح  
انما الدهر عدو و لمن أصغى نصيح  
و لسان الدهر بالسوءط لواعيه فصيح  
نحن لاهون و آجال المنا لا تستريم  
يا غلام الكأس فاليأس من الناس مريم  
أنا يا دهر بأبـذاك شق و سطيم  
و بأبكار القوافى لا على كفؤ - شعيم

3. Translate into English, adding explanatory notes where necessary :—

كنيسة بلارمة - و من أعجب ما شاهدناه بها من امور  
النصارى كنيسة أبصرناها . الميلاد و هو يوم عيد لهم عظيم

و قد اهتملوا لها رجلا و نساء فأبصرنا من بنيانها مرأى يعجز  
الرصف عنه و يقع القطع بأنه أعجب مصانع الدنيا المزخرفة  
جدرها الداخلة ذهب كلها و فيها من الراح الرخام الملون مالم  
ير مثله قطّ قد رصعت كلها بفصوص الذهب و كللت بأشجار  
الفصوص الخضر و نظم أعلاها بالشمسيات المذهبات من الزجاج  
فتخطف الابصار بساطع شعاعها و تحدث فى النفوس فتنة \*

4. Translate into English :—

و قد بلغنى أن من المالطيين من اذا فُجع بشيئ فجأ  
أكل فأرا أو ضفدعا لازالة الدهشة و كيف كان فان أخس  
الفلاحين بمالطة يعرف من أنواع الطبخ ما لا يعرفه أكبر تاجر  
ببلاد الانكليز فانهم يطبخون اللحم مع جميع البقول و الغالب  
أن الافرنج لا نظافة لهم فى الطبخ لأنهم قليلا ما يبيضون آنية  
الطبخ حتى ان هذه الصنعة فى مالطة تكاد أن تعدّ من المفقر  
و اكثر آنية الطبخ عند الانكليز من الحديد و هو أسام عاقبة -  
و أهل مالطة مثل غيرهم من الافرنج فى كونهم يأكلون المخبوز  
و زادوا عليهم فى أكلهم الميته من الدجاج و اذا دعرت أحدا  
منهم الى مأدبة لم يكن منه في خلال التهامه مايبين يديه  
الا الثناء على نفسه بأنه قليل الاكل - و كلهم يأكلون الثوم و  
البصل نيا فلا تزال رائحة أفواههم منتشرة \*

(OLD SYLLABUS)

THIRD PAPER

FIRST HALF

*The figure in the margin indicates full marks.*

1. Translate into Arabic either A or B :—

50

A.

For the moment an empire which had stretched from the Danube to the Orentes appeared to be almost annihilated by a single blow. Its

recovery, however, under the wise rule of Muhammad I, 'The Gentleman', was scarcely less remarkable. and, after an interval of peace and consolidation, Murad II was able to defend the empire from the attacks of Hunyady, the 'White Knight of Wallachia', and to avenge a violated treaty by the decisive victory of Varna (1444) over a vast army of Christian crusaders. This signal success secured the Turks from invasion from the north, and history of the next two centuries is a long record of triumphs. Constantinople fell to Muhammad II in 1453 and the last remnant of the Byzantine empire was thereby destroyed. The Crimea was annexed, the Aegean islands became Ottoman soil, and the Turkish flag waved even in Italy over the castle of Otranto. In his brief reign of eight years, Salim I, 'the Grim', defeated the Shah of Persia, and added Kurdistan and Diyar Bakr to the Turkish Empire; took Syria, Egypt, and Arabia from the Mamluks; and not only became the master of the Holy Cities of Mecca and Medina, but received from the last 'Abbasid Caliph of Cairo the relics of our Holy Prophet and the right of succession to the Caliphate, in virtue of which the Ottoman Sultans have ever since claimed the homage of the faithful.

## B.

Yaqub, the son of Lais the Saffar, was by a freak of fortune promoted from the leadership of a band of outlaws to a post of trust at the Court of the Caliph's governor of the province of Sistan, when he eventually succeeded, sometime before 868. By that year he had annexed Herat and occupied Kair, including the capital Shiraz, to which he soon added Balkh and Tukharistan, and in 872 took Khurasan from the Tahirids. After an expedition in Tabaristan, where he defeated Hasan bin Zaid the 'Alid, he openly revolted against the Caliph, Mu'tamid, and advanced through Shiraz and Ahwaz upon Baghdad; but was routed by the Caliph's brother, Muwaffak, and died in 878. His brother and successor, 'Amr' was confirmed in the governments of Khurasan, Fars, Kurdistan, and Sijistan. The Caliph, however, distrusting 'Amr's power, induced Isma'il the Samanid to attack him in 900, when the Saffarid was defeated and made prisoner.

## SECOND HALF

*The questions are of equal value.*

1. Translate any three of the following extracts into Arabic, and put down the vowel-points : —

## A.

عن انس (رض) قال خرج عمر متقلدا سيفه فلقبه رجل من بنى زهرة فقال ابن تميم يا عمر فقال اريد ان اقلل محمدا قال و كيف تامن من بنى هاشم و بنى زهرة و قد قتلت محمدا فقال ما اريك الا قد صبت قال افلا ادلك على العجب ان خنتك و اختك قد صبرا و تركا دينك فمشى عمر فاتهما و عندهما خباب فلما سمع بحس عمر توارى في البيت فدخل و قال ما هذه الهينة و كانوا يقرؤن طه قالوا ملحد حديثا تعدثناه بنينا قال فلعلكما قد صبرتما فقال له خنته يا عمر ان كان الحق في غير دينك فوثب عليه عمر فوطئه و طأه شديدا فجاءت اخته لتدفعه

عن زرجها فنفحها نفحة بيده فدمى وجهها فقالت وهي غضباء و ان  
 كان الحق في غير دينك انى اشهد ان لا اله الا الله و ان محمداً  
 عبده و رسوله - فقال عمر اعطونى الكتاب الذى هو عندكم فاقرأه و كان  
 عمر يقرأ الكتاب - فقالت اخته انك رجس و انه لا يمسه الا المطهرون  
 فقم و اغتسل او توضأ فتوضأ ثم اخذ الكتاب فقرأ طه حتى انتهى الى  
 اننى انا الله لا اله الا انا فاعبدنى و اتم الصلوة لذكرى - فقال عمر  
 دلونى على محمد فلما سمع خباب قول عمر خرج فقال ابشريا عمر  
 فانى ارجو ان تكون دعوة رسول الله لك \*

B.

نستطيع اليوم ان نقرر ان نظام التدريس المتبع فى جامعات العالم  
 قد سبقها فيه جامعتنا الازهرية العتيقة فالاصل فى نشوء الجامعات  
 ان يجلس عالم فى مكان ما و تلتف حوله طائفة من التلاميذ لهم  
 مطلق الحرية فى الاستماع له او الانفضاض عنه و يلقي من يجلس اليه  
 ما فقه من علوم و معارف لا يقبل عليها مالا او عطاء - تلك هى  
 الفكرة التى اشتقت لها الكلمة اللاتينية القديمة (Universitat) و التى  
 اتسع مدلولها حتى اصبحت كلمة (University) تطلق الان على الجامعات  
 الحديثة - فمنذ عشرة قرون من الزمان انت ترى العلماء فى الازهر  
 كل يجلس بجانب عمود من اعمدته الكثيرة و يلتف حوله من يريد  
 ان ياخذ عنه العلم من الطلبة \*

C.

خدعوا بقولهم حسناء	و الغوانى يغرن الثناء
اتراها تناست اسمى لما	كثرت فى غرامها الاسماء
ان راتنى تميل عنى كان لم	تك بينى و بينها اشياء
نظرة فابتسامة فسلام	فكلام فموعد فلقاء
يوم كنا و لا تسلك كيف كنا	فتهادى من الهوى ما نشاء
و علينا من العفاف رقيب	تعبت فى مراسه الاهواء

ففرق يكرن فيه دراء او فراف يكون منه الداء

## D.

لحظها لحظها رويداً رويداً      كم الى كم تكيد للرج كيداً  
 كف اولا تكف ان بجنبى      لسهاماً ارسلتها لن تردا  
 تصل الضرب ما ارى لك حدا      فائق الله و التزم لك حدا  
 ارفصغ لى من الحجرة قلياً      قم صغ لى من العداؤد كيدا  
 ر اكف جفنى دافقا ليس يرقا      ر اكف جنبى خافقا ليس يهدا  
 فمن الغبن ان يصير ر عيداً      ما قطعت الزمان ارحوه وعدا

## (OLD SYLLABUS)

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be attempted*

1. Describe briefly the main themes of any three of the Muallaqat, and discuss the chief characteristics of these poems.
2. Describe briefly and discuss the services of the Umayyads to the Arabic prose literature.
3. Describe the causes of the revolt of the literary men under the Abbasides against Classicism. Mention the changes brought about by the new school of poetry. Give the names of two important representative poets of the new school, and discuss the chief features of their poetry.
4. Give a brief sketch of the origin and development of the Geographical literature in Arabic.
5. Describe briefly any four of the following books :—
  - (1) al-Fihrist by Ibnu'l-Nadīm.
  - (2) The Tārikhu'l-Rusul-i-wal-Mulūk by al-Ṭabarī.
  - (3) The Kitābu'l-Aghānī by Abu'l-Faraj.
  - (4) The Ihya'u'l-Ulum by al-Ghāzali.
  - (5) The Muruju'l-Dhahab by al-Mas'ūdī.

## SECOND HALF

*Answer ANY THREE of the following*

1. Write a note on the literary renaissance which began in Syria due to the influence of the Ḥamdanid Saif al-Dawla.
2. Give a sketch of the life and work of ibn Ḥazm al-Undulusī or of Ibn Rushd.
3. What was the contribution of Spain to Arabic literature, especially in the field of poetry?

4. Write an account of the literary activity of *one* of the following writers and estimate his importance in the development of Arabic literature :—

Bedi' al-Zamān al-Ḥamadhānī; al-Suyūfī; Imām Bukhārī.

5. 'Ghazālī made his mark by leading Islām back to its fundamental and historical facts and by giving a place in its system to the emotional religious life.' Discuss.

### (OLD SYLLABUS)

#### FIFTH PAPER

*The questions are of equal value.*

#### FIRST HALF

*Answer ANY THREE questions only.*

1. Describe الاسدب التسعة of غير المنصرف and give examples of each. When does غير المنصرف become منصرف ?

2. What are مذهب الكوفى and مذهب البصرى in تنازع الفعلان ? Explain fully with examples. Does تنازع الفعلان exist in كفانى ولم اطلب قليل من المال ?

3. Enumerate ستة ارجه فى لا حول ولا قوة الا بالله and explain them with examples. What is مذهب ابى العباس , regarding the same ?

4. (a) What are الوجهان فى صفه المفرد ? Illustrate fully.

(b) Explain حكم المعطوف حكم الصفة الا فى البناء and give examples.

5. Describe خمسة اضرب فى اعراب المستثنى and give examples of each.

#### SECOND HALF

*Answer ONE question from each group*

##### I.

1. Describe the conditions (احوال) of مسند اليع and مسند (احوال) , giving examples.

2. Define and illustrate :—

(١) القصر (٢) الفصل والوصل (٣) الايجاز والاطناب والمساراة -

## II.

3. Explain and elucidate by examples :—

”والنظر ههنا فى اركانہ ( اى التشبيه ) وهى طرفاه ورجهه  
واداته وفى الغرض منه واقسامه“

4 (a) Name the divisions of الاستعارة , citing examples.

(b) Differentiate between المجاز المرسل and الاستعارة .

## III.

5. Define and illustrate with examples :—

(١) المطابقة (٢) مراعاة النظير (٣) الجناس (٤) ردالعجز  
على المصدر \*

6. Write a note on Plagiarism السرقات الشعرية .

(OLD SYLLABUS)

SIXTH PAPER

FIRST HALF

*The figures in the margin indicate full marks*

1. Translate into English, adding explanatory notes, either A or B :— 15

A.

(اذ) منصوب به و قيل باضمار اذكر و امرأة عمران  
هى امرأة عمران بن ماثان ام مريم البتول جدة عيسى  
عليه السلام و هى حنة بنت فاقون و قوله ( اذ قالت  
امرأة عمران ) على اثر قوله و آل عمران مما يرجع ان  
عمران هو عمران بن ماثان جد عيسى و القول الاخر يرجعه  
ان موسى يقرن بابراهيم كثيرا فى الذكر \*

روى انها كانت عاقرا لم تلد الى ان عجزت فبينما  
هى فى ظل شجرة بصرت بطائر يطعم فراخه فتعكرت نفسها  
للولد و تمنته فقالت اللهم ان لك على نذرا شكرا ان



رزقنى ولدا ان اتصدق به على بيت المقدس فيكون من سدنته وخدمه فعملت بمريم وهلك عمران وهى حامل (محورا) معتقا لخدمة بيت المقدس لا يدلى عليه ولا استخدمه ولا اشغله بشيىء و كان هذا النوع من النذر مشروعا عندهم و روى انهم كانوا يذرون هذا النذر فاذا بلغ الغلام خير بين ان يفعل و بين ان لا يفعل و عن الشعبى محورا مخلصا للعبادة و ما كان التحرير الا للعلمان و انما بنيت الامر على التقدير او طلبت ان ترزق ذكرا \*

## B.

( ولا تهنوا ولا تحزنوا ) تسلية من الله سبحانه لرسوله صلى الله عليه وسلم وللمؤمنين عما اصابهم يوحد احد وتقوية فى قلوبهم يعنى ولا تضعفوا عن الجهاد لما اصابكم اى لا يورثنكم ذلك وهذا وجبنا ولا يتالوا به ولا تحزنوا على من قتل منكم و جرح ( وانتم الاعلون ) و حالكم انكم اعلى منهم و اغلب لانكم اصبتم منهم يوم بدر اكثر مما اصابوا منكم يوم احد از و انتم الاعلون شانا لان قتالكم لله و لاعلاء كلمته و قتالهم للشيطان و لاعلاء كلمة الكفر و لان قتالكم فى الجنة و قتالهم فى النار اوهى بشارة لهم بالعلو والغلبة اى و انتم الاعلون فى العاقبة و ان جندنا لهم الغالبون ( ان كتمتم مؤمنين ) متعلق بالنهى بمعلى ولا تهنوا ان صم ايمانكم على ان صحة الايمان توجب قوة القلب وقلة المبالاة باعدائه او بالاعلون اى ان كنتم مصدقين بما يعدكم الله و يبشركم من الغلبة والمعنى ان نالوا منكم يوم احد فقد نلتهم منهم قبله يوم بدر ثم لم يضعف ذلك قلوبهم ولم يثبطهم عن معارذكم بالقتال فانتم اولى ان لا تضعفوا \*

2. Write notes on the following :—

10

بيت المقدس - بدر - احد - آيات متشابهات - بنى نجران

3. What are the chief features of the تفسير كشاف which made it popular among the students of Quranic literature in spite of its author being a معتزله . 15

4. Explain the following in your own Arabic :—

10

الذين ينفقون فى السراء والضراء والكاظمين الغيظ والعافين عن الناس والله يحب المحسنين والذين اذا فعلوا فاحشة ار ظلموا انفسهم ذكروا الله فاستغفروا لذنبهم ومن يغفر الذنوب الا الله \*

## SECOND HALF

*The questions are of equal value*

*Attempt only THREE questions*

1. Translate into English, adding notes where necessary :—

وعن عمران بن حطان قال اتيته اباذر فوجدته فى المسجد محتبيا بكساء اسود رحدة فقلت يا اباذر ما هذه الرحدة فقال سمعت رسول الله صلى الله عليه وسلم يقول الرحدة خير من جليس السوء والجليس الصالح خير من الرحدة واملاء الخير خير من السكوت والسكوت خير من املاء الشر \*

وعن عطاء الخراسانى ان رسول الله صلى الله عليه وسلم قال تصانعوا يذهب الغل و تهادوا تعابوا تذهب الشحناء \*  
وعن اسيد بن حضير رجل من الانصار قال بينما هو يحدث القوم و كان فيه مزاج بينا يضحكهم فطعنه النبى صلى الله عليه وسلم فى حاضرتة بعود فقال اصبرنى قال اصطبر قال ان عليك قميصا وليس على قميص فرفع النبى صلى الله عليه وسلم عن قميصه فاحتفنه وجعل يقبل كشحه فقال انما اردت هذا يا رسول الله \*

و عن رائلة بن الخطاب قال دخل رجل الى رسول الله صلى الله عليه وسلم و هو فى المسجد فأتوا فأتوا له رسول الله صلى الله عليه وسلم فقال الرجل يا رسول الله ان فى المكان سعة فقال النبى صلى الله عليه وسلم ان للمسلم لحقا اذا رآه اخوه ان يتزحزح له \*

و عن اسلم قال ان عمر دخل يوما على ابى بكر الصديق و هو يجهد لسانه فقال عمر مه غفر الله لك فقال له ابوبكر ان هذا اردنى الموارد \*

2. Explain in Arabic :—

عن ابى هريرة قال قال رسول الله صلى الله عليه وسلم لتؤدن الحقوق الى اهلها يوم القيمة حتى يقاد للشاة الجعاء من الشاة القرناء و عنه قال قال رسول الله صلى الله عليه وسلم ليس الشديد بالصرعة انما الشديد الذى يملك نفسه عند الغضب \*

و عن مكحول قال قال رسول الله صلى الله عليه وسلم المؤمنون هينون لينون كالجمل الانف ان قيد انقاد و ان انيخ على صخرة استنخ \*

و عن عياض بن حمار قال قال رسول الله صلى الله عليه وسلم اهل الجنة ثلاثة ذر سلطان مقسط متصدق موفى و رجل رحيم رقيق القلب لكل ذى قربى و مسلم و عفيف متعفف ذر عيال \*

و عن ابى ثعلبة الخشنى ان رسول الله صلى الله عليه وسلم قال ان احبكم الى و اقربكم منى يوم القيمة احاسنكم اخلاقا و ان ابغضكم الى و ابعدكم منى مساريكم اخلاقا الثرثارون المتشدقون المنفيقون \*

ر عن ابى هريرة عن النبى صلى الله عليه وسلم قال  
انكم ستحرصون على الامارة وستكون ندامة يوم القيمة فنعم  
المرفعة بلست الفاطمة \*

ر عن جابر بن سمرة قال سمعت رسول الله صلى الله عليه  
وسلم يقول ثلاثة اخاف على امتى الاستسقاء بالانواء وحيث  
السلطان وتكذيب بالقدر \*

3 Write notes on the words and phrases overlined, and translate the passages into English:—

ان الله تعالى لا يعذب العامة بعمل الخاصة حتى يروا  
المنكر بين ظهرائهم وهم قادرون على ان ينكروا فاذا فعلوا  
ذلك عذب الله العامة والخاصة ان الدنيا حلوة خضرة  
لا يدخل الجنة الجواظ ولا الجعظرى اياكم رسو ذات البين  
فانها الهالقة البذاء والبيان شعبتان من النفاق لا تنزل  
الرحمة على قوم فيهم قاطع رحم قال رسول الله صلى الله  
عليه وسلم هلك المتنطعون ر عن قيلة بنت مخزومة انها  
رات رسول الله صلى الله عليه وسلم ر هو قاعد القرفصاء قالت  
فلما رايت رسول الله صلى الله عليه وسلم المتخشع ارعدت  
من الفرق \*

4. Give the substance of such passages in *Hadith* which enable us to form a mental picture of Paradise and Hell.

5. Which books are referred to as الصحيح الست? Do they all contain only such احاديث as are termed الصحيح? Apart from the compilers of the *Sihāh*, which other رواة الحديث are quoted by الائمة المتقنون as التبريزى?

## M.A. EXAMINATION

## (OLD SYLLABUS)

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be attempted*

1. Describe and discuss what are the causes, political and otherwise, which led to the Arab invasion of Syria during the caliphate of Hazrat Abu Bakr.
2. What led to the civil war between the Omayyads and the Hashimites during the caliphate of Hazrat Ali? Examine the claims of the Omayyads to the Islamic caliphate.
3. Write historical notes on *any four* of the following :—  
Fustât ; Kadişiyya ; Ajnâdin ; Diwan ; Surra-man-Ra'â ; Abu Muslim-al-Khurâsâni ; Kusafa ; Kayrawân.
4. Comment on the following remark of Weil :—  
'The split between the Yamanides and the Mudarites in the caliphate of Sulaymân and Yazîd, unceasingly fostered by the Hashimites, was a misfortune of portentous magnitude for the Empire.'
5. Discuss the causes which led to the dismemberment of the Abbasid Empire, and give an account of the Tartar invasion of Baghdâd, laying stress on the part played by Ibn-ul-Alkami, the vizier.

## SECOND HALF

*Attempt ANY THREE of the following*

1. Sketch the career of Abdur Rahman ad-Dâkhl. Compare and contrast him with Abdur Rahman an-Nâsir.
2. When, how, by whom, and in whose reign was Andalusia first conquered? What was the fate of these brave conquerors?
3. Trace in broad outlines the history of the Fâtimit power of Egypt and account for its downfall.
4. Give an account of Mahmud of Ghazna's chief Indian campaigns and of the local princes with whom he came into conflict. What causes contributed to his success?
5. Describe and discuss the chief causes of the downfall of the Mughal Empire.

## (OLD SYLLABUS)

## EIGHTH PAPER

*The figure in the margin indicates full marks*

1. Write an essay on *any one* of the following subjects :— 100  
 (1) The origin and development of sufism in Islam.  
 (2) Rationalism in Islam.  
 (3) \* "العرب خدعة"  
 (4) \* مميزات دولة العباسيين و اثرها الخالد على الاداب

## PERSIAN

## FIRST PAPER

*The questions are of equal value*

## FIRST PART

*Maximum Marks—70**Only FOUR questions are to be attempted*

## INTERNAL EXAMINERS

AGA MUHAMMAD KAZIM SHIRAZI.  
 MAULVI MD. ISHAQUE, M.A., B.Sc.  
 PROF. M. Z. SIDDIQI, M.A., PH.D.  
 MAULVI SHAH KALIMUR RAHMAN.  
 MAULVI ABDUR RASHID.  
 MR. L. BOGDANOV.

## EXTERNAL EXAMINERS

SIR Z. R. ZAHID SUHRAWARDY, KT., M.A., B.L.  
 DR. A. SATTAR SIDDIQUI.  
 MR. A. GHANI.  
 DR. A. HADI.  
 SIR A. SUHRAWARDY, KT., M.A., PH.D., BARRISTER-AT-LAW,  
 M.L.A.  
 MAULVI FIDA ALI KHAN.  
 DR. M. IQBAL.  
 DR. NIZAMUDDIN.

1. 'Happy was Persia to have been blessed with two great kings in successive generations. Cyrus the great was the conqueror and founder of the Persian empire. Darius, equally deserving the title "great", fought constantly against desperate odds. But more than this he had the capacity to organise.'

Discuss the above statement.

2. Describe briefly the organization, religion, and architecture of the Parthians.

3. Give a brief sketch of the rise of the Sasanian dynasty, and discuss the chief causes of its fall.

4. Describe briefly the services of Mu'awiya I to the history of Islam, and discuss his character.

5. Describe briefly the services of al-Manṣūr to the establishment of Abbaside power, and discuss his character.

6. Give a brief sketch of the rise and fall of the Saljuq dynasty.

## SECOND PART

*Maximum Marks—30**Attempt ANY THREE*

1. Describe the first conquest of Sindh by the Muslims and its subsequent history.

2. Describe the raid of Nadir Shah Durrani on India and the state of the Mughal Court at Delhi at that time. What effect had it on the subsequent history of India ?

3. Did any Hindu king reign in Bengal since its conquest by the Muslims ? Give dates and details.

4. Give an account of the reign of Sher Shah and the beneficent works done by him.

5. Who among the descendants of Aurangzeb was the greatest as a king ? Give an account of his reign.

## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE of the following questions*

1. Enumerate the various periods into which the history of Persian literature can be divided, and mention the names of important poets who flourished during each period.

2. Give a short sketch of the life of Rudaki, and discuss if he was born blind.

3. Argue whether Firdausi was the pupil of Asadi and whether the latter helped the former in the completion of the Shahnamah.

4. Sketch briefly the life of *ملرحری* and give an estimate of his poetry.

5. Mention the distinctive characteristics of the poetry of the Ghaznavid and Seljukid periods.

### SECOND HALF

*Attempt THREE questions.*

1. Give a short sketch of the life of Nizamul-Mulk, and estimate the value of his services to Persian literature.

2. 'The Persian as developed in India under the patronage of the Mughals is distinct from the classical Persian.' Discuss

3. 'The genius as well as character of Nizami of Ganja has few rivals in Persia.'

Discuss the above statement, and determine the value of his contribution to Persian poetry.

4. Write notes on any four of :—

تذکرۃ الاولیاء - لباب الالباب - آتشکده - آئین اکبری

تاریخ جهانکشا - چهار مقاله \*

## THIRD PAPER

The figures in the margin indicate full marks

## FIRST PART

## RHETORIC AND PROSODY

1. Define any five of the following :—

5

رکن - ضرب - عجز - ردیف - فاصله کبری - رری -  
حشر - رتد مفروق - تسبیخ \*

2. Either,

7

Explain the fundamental rules on which scansion in Persian poetry is based. Give examples.

Or,

State and enumerate the **عیرب قافیہ**, illustrating them with examples.

3. Scan the following verses and name the meters :—

3

(a) بر آسمان علم ضمیر تو آفتاب

اما مسیر او نه همین آسمان علم

(b) قناعت گنج آباد است اگر دانی

ازر تا میتوانی زر نکردانی

4. Either,

8

Explain the true signification of **مجاز مرسل**. Classify its different varieties, and give examples.

Or,

Point out the difference between **ایهام** and **توریہ**, and give examples illustrating each of the two.

5. Name and explain the Rhetorical figures in the following verses :—

7

(a) بادگوئی مشک سوده دارد اندر آستین

باغ گوئی لعبتان جلوه دارد در کنار

(b) لب سؤال سزاوار بخیه بیشتر است

عبث بخرقه خود بخیه میزند درویش



## PHILOLOGY

5.

*Either,*

12

What was the alphabet of the Persians before the Arabs came and conquered Persia? Whence did the Persians get their present alphabet? Classify them on the basis of the parts of the mouth where they are produced.

*Or,*

Illustrate the relationship of Sanskrit and Persian in the Aryan family of languages.

7. Give the etymology of *any five* of the following :—

10.

بنده - فراز - پیرامون - تو - پهلو - دشوار - امرورز -

دیوانه - دنبال - موبد \*

8.

*Either,*

Give instances of (at least five) words that have departed in India far from their meaning in which they are used in Persia.

*Or,*

Give the archaic Persian equivalents of the following :—

نسب - عالم - مخصوصاً - عرض - مشرق - انصاف

## SECOND PART

1. Give in English the substance of *either* (a) or (b):—

15

(a) گفتیم اندر این کتاب آنچه باغاز از ضمان کردیم حسب طاقت خویش آنچه از این گفتها حق و صدق است بجزد خدایند ما ست و آنچه معلول و با تقصیر است بحکم ضعیفی و بندگی ما ست و غرض ما از آنچه گفتیم بیدار کردن است نخست مر نفس خویش را آنگاه مر نفوس راستان و مؤمنان را بر شفاخت خدا بدالالت آفریده‌ای او و راه نمودن است سوی خدا و رسول او بر علم و عمل که بدین روا ست مردم را رسیدن بنعمت ابدی و پرهیزیدن از عذاب سرمدی و الله اعلم بالصواب و الیه المرجع و المآب \*

(b) درویش بی معرفت نیار آمد تا فقرش بفرنه انجامد که کاد لفقّر ان یكون کفرأ \* نشاید جز بپروند نعمت برهنه

را پوشیدن یا در استخلاص گرفتاری کوشیدن و ابدی جنس ما را بمراتب ایشان که رساند و ید علیا بید سفلی چه ماند - نه بینی که حق جل و علا در محکم تنزیل از نعیم اهل بهشت خبر می دهد که "اولئك لهم رزق معلوم" تا بدانی که مشغول کفاف از دولت عفاف محروم است و ملک فراغت زیر نگین رزق مقسوم - تشنگان را نماید اندر خواب \* همه عالم بچشم چشمه آب

2. Explain :—

5

- (i) The words مر and راستان in Question 1(a) ;
- (ii) The ی in سوی خدا and ابدی in Question 1(a) ;
- (iii) The همزه in برهنه and چشمه in Question 1(b) ;
- (iv) ید سفلی and ید علیا in Question 1(b).

3. Copy extract (b) of Question 1 and supply the passage with the 10  
marks of the *Izafat* (کسره اضافت)

4. Rewrite in your own Persian either (a) or (b) :—

10

(b) السيد نعمت الله الشهير سيد آغا ئی سيدی عالی قدر و در فلون هندسی و ریاضی منشرح الصدر - بشعر و شاعری رغبتی تمام داشت - دیوانی تخمیناً سه چهار هزار بیت از زیاده دار است - اشعار برجسته دارد - سید تخلص ارست - در جوانیها از شوشتر برآمده در عراق و خراسان بتکمیل علوم ریاضی پرداخت و از آنجا بهند افتاده در بستان زیچ محمد شاهی سر آمد رصد بغداد دقیقه یاب و احذق اختر شناسان بطلمیوس انتساب بود \*

(b) چون اسکندر بر مملکت دارا غلبه کرد و لشکر عجم بعدد و عد بسیار بودند اندیشه نمود که اگر ایشان را می گذارد مبادا اتفاق نمایند و دفع ایشان متعذر باشد و اگر ایشان را استیصال نماید از قاعده ملت و مرور دور باشد - و با حکیم

ارسطاطاليس مشاورت کرد - حکيم فرمود که ايشان را متفرق ساز و هریک را بر حکومت و ايلات موضوعی رجوع نمایی تا بهمدیگر مشغول شوند و تراز شر ايشان ایمن باشی \*

#### FOURTH PAPER

*The questions are of equal value*

#### FIRST HALF

*Only four questions are to be attempted*

1. In what respects does modern Persian language differ from that of the earlier period? Describe some of its special features and illustrate them with examples.

2. Describe in Persian the character of Sakina Khanam as it is depicted in the **وکلائی مرائعہ**.

3. Give the context and translate into English, any two of the following passages:—

(a) آقا کریم - جان خودت! شما را نزد حاجی غفور نوعی تعریف کرده بنظر داده‌ام که اگر خودت هم آنجا بودی در حق خود مشتبه میشدی - گفتم "امروز پیش حاکم شرع معتبرتر از آقا مردان کسی نیست - هرگز حرفش دوتا نمیشود - هرچه گوید همان است" در بخانه دیوان هم میان وکلا شرع از معروف است و بس حقی برای بعضی کارها حضور شاهزاده هم آمد و رفت دارد - در کاردانی افلاطون عصر خودش است - باید هرچه بگوید از حرف او بیرون نرود و بهیچ وجه راهمه و احتیاط نکنید - همین با تدبیرات او بدولت حاجی غفور مالک میتوانی شد - و الا تو در این ارث هیچ حق نداری" زنکه خودش و برادرش آقا عباس هر دو راضی و خوشحال شدند - الان پیش شما خواهند آمد، که هرچه بگوئی، دستور العمل بدهی رفتار کنند \*

(b) رفیق! بیا و قلیان بکش، اندره مکش، دل خوش دار - غم مدار - هرچه بر انسان آید بخواست خدا است، و چاره بدست خدا،

اگر این قاطر سیاه را که سوارم خداوند سیاه آفریده بود ، ایا من میتوانستم سیاه کرد ، این حیوان دیروز جو خورده است ، اما امروز گاه میخورد ، فردا که میداند خار خواهد خورد یا خاشاک ! با قسمت معارضه ر با طالع ستیزه نمیتوان کرد - تو حالا قلیانیت را بکش ، اوقات تلخ نشود و دم را غنیمت شمار ، مگر این شعر حافظ را نشنیده ؟ \* مصراع \*

هر وقت خوش که دست دهد مفتنم شمار

امروز هم میگذرد - فردا هم خدا بزرگ تر است \*

(c) در ایام زمین گیری با سر بسر بحالت خویش اندیشیده چنان بعقلم رسید که ورودم بمشهد در ساعت نحس بوده است ، مثلاً که میداند قمر در برج چه بوده است اول کمرکم شکست و بعد ازان ناخنم ریخت ، اگر قدری دیگر بمانم شاید خونم بریزد - چه به ازان که تا پا دارم ، ازیں ویران شده بگریزم ، پس قصد سفر طهران نمودم ، و نیت خود را بدریشان بگویم - پسندیدند - علاوه براین درویش سفر همسفریم خواست که علماء از هروای کار من بد هوا شده اند و خمیر مایه بدی بر ایم بآب گرفته اند - چه با ملایان بحوال رفتن کار حصرت خرس است - \* مصرع \*

باید برن کشیدن زین و رطه رخت خویش

4. Explain fully any eight of :—

(a) سگان پر پشم و پيله از دیدن ما بیگانگان پیارس و هجوم

پرداختند \*

(b) او بعزمت ریش و من بعزت ننگ دعوا را کوتاه کردم \*

(c) نیزه داران درختان شانهای مشکین کلاله افراشتند در همزن

هنگامه و غارتگری شهر دی گشتند \*

(d) امین الدولة صدر اصفهان را با من شکر آبی بود \*

(e) در روز نوروز در وقت بندبازی دختر زنبور کچی باشی -

پا سوزم \*

(f) آب دهانشان خشک شد \*

(g) من که نمی فهمم \*

(h) از رویت آقا حسن بدم می آید - اگر به بینم زهره رگ

شوم \*

(i) تو چه کاره که بتوانی از حرف من در بروی \*

(j) البته خوشگل یا بد گل چه تفاوت دارد ، بگذار عفریته بوده

باشد بهتر شما اگر بیابد میل بکند \*

(k) اگر مرا اراسته ببیند زیاده تر حساب میبرد \*

(l) حال برخیزم - بروم - حاشیه نشینان را بیزم آماده کار نمایم

فردا وقت مرافعه بقدر لزوم آنها گوش و دم بجنبانند \*

5. Describe briefly in Persian, the سرگذشت ملک الشعراء .

6. Give a critical estimate of the poetry of Bahar, and point out how far it differs in language and thought from that of the earlier Persian poets.

## SECOND HALF

1. Write an essay, in Persian, on one of the following subjects :—

- (a) The Religion of pre-Islamic Persia.
- (b) The Contribution of the Persians to Arabic literature and Science.
- (c) The Influence of Arabic poetry on the poetry of Persia.
- (d) The Development of Persian literature after the conquest of Persia by the Arabs until Firdawsi.

(GROUP A.)

(LITERATURE.)

FIFTH PAPER

FIRST PART

*The figures in the margin indicate full marks.*

- |   |    |
|---|----|
| 1. Write a short biography of Sa'di or Nazîrî, in Persian.                                      | 12 |
| 2. Compare Sa'di and Nazîrî as composers of ghazal.   | 12 |
| 3. Translate any two of the following into English, giving explanatory notes where necessary :— | 20 |

A.

برخیز تا یکسو نهیم این دلق ازرق نام را

برباد قلاشی دهیم این شرک تقوی نام را

هر ساعت از نو قبله بابت پرستی میرود  
 توحید بر ما عرضه کن بشکنیم اصنام را  
 می با جوانان خوردنم خاطر تمنا می کند  
 تا کودکان در پی فتند این پیر درد آشام را  
 کز مایه بیچارگی قطعیـر مردم میشود  
 ما خولیای مهتری سگ میکند بلعام را  
 زین تنگنای خلوتم خاطر بصعرا میکشد  
 کز بوستان باد سحر خوش میدهد پیغام را  
 غافل مباش از عاقلی دریاب اگر صاحبـدلی  
 باشد که نتوان یافتن دیگر چنین ایام را  
 جائیکه سر بوستان با پای چوبین میچمد  
 ما نیز در رقص آوریم آن سرو سیم اندام را  
 دلبندم آن پیمان گسل منظور چشم آرام دل  
 نی نی دل آرامش معوان نزل بود آرام را  
 آرام ردین و صبر و هوش از من بروت اندر غمش  
 جائی که سلطان خیمه زد غوغا نماند عام را  
 باران اشکم میرود از ابر آه آتش جهد  
 با پختگان گوی این سخن سوزش نباشد خام را

B.

از حال منت خبر نباشد  
 در کار منت نظر نباشد  
 تا قوت صبر بود کردم  
 دیگر چه کنم اگر نباشد  
 آئین وفا و مهر دینی  
 در شهر شما مگر نباشد  
 گویند چرا نظر بدستی  
 تا مشغله خطم نباشد

ای خواجه برر که جهد انسان  
 با تیر قضا سپر نباشد  
 این شور که در سر است مارا  
 رقتی برود که سر نباشد  
 بیچاره کجا رود گرفتار  
 کز کوی تو ره بدر نباشد  
 چون روی تو دلفریب و دلبلند  
 در روی زمین دگر نباشد  
 در پارس چنین نمک ندیدم  
 در مصر چنین شکر نباشد  
 گر حکم کنی بجان سع  
 جان از تو عزیز تر نباشد

C.

قاصد دلی آزرده تر از آبله دارد  
 می آید ازان کوئی رز رفتن گله دارد  
 کس خیمه نیفراخت بسر چشمه حیوان  
 گاهی گذری خضر برین مرحله دارد  
 شاید که شود جلوگر از غیب جمالی  
 چشمی همه کس بر ره این قافله دارد  
 معشوق جمیل ست و غیور ار نه بگویم  
 معجون نسب از لیلی این سلسله دارد  
 هرئی بفراغت نکند در همه صحرا  
 دیوانه که آهوی رمان در گله دارد  
 دریاش همی باید و در ظرف نگنجد  
 صد گونه الم طائر کم حرصه دارد  
 فارغ نشوم یک نفس از بندگی عشق  
 شکرانه فرضی که کدم نافله دارد

بی باده کنم مستی ربی نغمه زلم ذوق  
 اینک می رنی هر که سر مشغله دارد  
 چون گفته و نا گفته بسنجیدن بخت ست  
 شعری که نگفتست نظیری صله دارد

4. Explain in Persian any six of the following :

18

- (ا) سعدیا مرد نگر نام نمیرد هرگز  
 مرده آنست که نامش بنکروی نبرند
- (ب) شراب از دست خوبان سلسبیل است  
 و گرنه خون میخواران سبیل است
- (ج) از خدا آمده آیت رحمت بر خلق  
 و ان کدام آیت لطف است که در شان تو نیست
- (د) آتش روی تو زینگونه که در خلق گرفت  
 عجب از سوختگی نیست که خامی عجبست
- (ه) گر رمقی بیش نماند از ضعیف  
 چند کند صورت بیجان بقا
- (ر) شمع را زنده دلی در شب تار آخر شد  
 روز عشرت همه در خواب و خمار آخر شد
- (ز) اقبال دوگیتی بکلاه نمیدی بود  
 دیهیم شه از خانه درویش بر آمد
- (ح) عشق تو شک انداخت بهفتاد و در ملت  
 حقیقت آئین خود از کیش بر آورد
- (ط) عشق را عشق دی و فردا نیست  
 دیر هم زرد تر ز زرد آمد
- (ی) نکتهی برخاست زین سودا بمصر  
 بر قمیص ماه کنعان ریختند



5. Write short notes on any four of the following :—

مهرگیا - صخره صما - یغما - الوند - رامتق - فرقدین - سیا

## SECOND PART

Maximum Marks—30

*The questions are of equal value*

1. Name three of the best Persian quatrain writers and determine the position of 'Umar Khayyam among them as a Ruba'i writer.
2. Discuss the genuineness of the quatrains generally ascribed to 'Umar Khayyam.
3. Translate into English any three of the following and comment upon them :—

(a) گر گوهر طاعتت نسفتم هرگز

گرد گنه از چهره نرفتم هرگز

با این همه نا امید نیم از کرمست

زان در که یکی را در نگفتم هرگز

(b) آن به که درین زمانه کم گیری دوست

با اهل زمانه صحبت از دور نکوست

آنکس که بجملگی قرا تکیه بر اوست

چون چشم خرد باز ننی دشمنست اوست

(c) چندان کرم و لطف ز آغاز چه بود

ران داشتیم در طرب و ناز چه بود

اکنون همه در رنج دلم میکوشی

آخر چه گنه کرده ام باز چه بود

(d) در کارگه کوزه گری رفتیم درش

دیدیم در هزار کوزه گویا و خموش

نا گاه یکی کوزه بر آورد خورش

کو کوزه گرد کوزه خرد کوزه فروش

## PERSIAN

(GROUP 'A' LITERATURE)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE of the equal value*

1. (a) Explain in simple Persian any one of the following extracts, adding notes where necessary :—

A.

دل من پیر تعلیم ست و من طفل زباندانش  
 دم تسلیم سر عشر و سر زانو دبستانش  
 نه هر زانو دبستانست و هر دم لوح تسلیمش  
 نه هر دیا صدفدارست و هر دم قطره نیستانش  
 سر زانو دبستانست چون کشتی نوح آنرا  
 که طوفان جوش درد اوست و جودی گرد دامانش  
 خود آنکس را که ریزی شد دبستان از سر زانو  
 نه تا کعبش بود جودی رنی تا ساق طوفانش  
 نه مرد این دبستانست هرگز جنبشی دردی  
 به هر دم چار طوفانست در بنیاد ارکانش  
 دبستان از سر زانو ست خاص آن شیر مردیرا  
 که چون سگ در پی زانو نشاند شیر مردانش

B.

نثار اشک من هر شب شکر ریوست پنهانی  
 که همت را زنا شریکست با زانو و پیشانی  
 چو هم زانو شرم باغم گریبان را کنم دامن  
 سرم را بر سر زانو کند دامن گریبانی  
 سرم زان جفت زانو شد که از تن حلقه میسازم  
 دران حلقه ترازو دار بیاعان روحانی

دلم کعبه است و تن حلقه چگونه حلقه کانرا  
 زبس دندان کش بینی دهان زمزمش خروانی  
 سر احرامیان عشق بر زانو به است ایرا  
 صفا و مروء مردان سر زانو گردانی  
 تو زین احرام زان کعبه چه دیدی کز برن چشمت  
 ز کعبه پوششی دیدست و از احرام عریانی

(b) Write a short notes on :—

سر عشر - سر زانو - کعبه - احرام - صفا و مروء

2. Write a short life of Khāqānī and discuss the following remark :—

هرچند ری (امام خاقانی) شاگرد فلکی شاعرست و بشعر  
 شهرت تمام یافته چنین گویند که ری را دراء طور شعر طور  
 دیگر بوده است که شعر در جنب آن کم بوده \*

3. Explain and annotate the following :—

- (i) بآل نفس چون زنبور کافر داشتم لیکن  
 بآخر یافتم چون شاه زنبوران مسلمانش
- (ii) چون طبع من فرزنی عیش آرزو کند
- (iii) علی را گوکه غوغای حوادث گشت عثمان را  
 علی را از جهان بگسل که ماتم دار عثمانی

4. (a) Give in simple Persian the substance of the admonition contained in the following :—

اسکندر و تنعم ملک و درروزه عمر  
 خضر و شعار مفلسی و عمر جاردان  
 بی طعمه طمع بسر آرزو کرم بید  
 چون کرم پیله سر چه کشی در سردهان  
 زنبور خانه طمع اسوده شد مشور  
 زنبور را ریش مکن زین و آن فغان  
 هم جنس در عدم طلب اینجا مجوی از آنکه  
 نیلوفر از سراب ندادست کس نشان

دامی چه کن ز ناخوش و خوش کم کن آرزو  
سیمرغ دش ز ناکس و کس کم کن آشیان

(b) Determine the signification of the word سیمرغ in the 5th bait of the above extract.

5. (a) Define and give examples of مبالغه from Khāqānī.

(b) Enumerate consecutively the signs of the zodiac (زُبرج) and the seven planets (سبع سیاره) in Arabic and Persian.

## SECOND HALF

Only THREE questions are to be attempted.

1. Give a short account of the life of Fayḍī and discuss the value of his contribution to Persian literature.
2. (a) Translate into English any one of the following extracts, adding explanatory notes where necessary:—

A.

مرآت ده عقل اولی  
صورت گر صورت و هیولی  
نقد روان بیک محک ساخت  
ده عقل رسه روح رنه فلک ساخت  
بنواخت بهر قرانه سازی  
بنهفت بهر ستاره رازی  
گشتند همه فلک نوردان  
آهسته روان و تیز گردان  
این جوف که ساخت با پس بجش  
پر کرده بچار آخش بجش  
رانگاه معردن از رسائط

بس روز زدرد و بس شب آراست  
کین چار چمن مرتب آراست

B.

دانای ازل بپاک زادی \* شاگرد خرد بارستادی  
 از نور سرشته ذات پاکش \* نی از ظلمات آب و خاکش  
 چون عقل بفکر نکته پرداز \* چون بحر بموج گوهر انداز  
 اسرار عقول و راز اجرام \* ارخوانده از عقل چون جم از جام  
 نقش همه دیده در مقابل \* اسکندر از آئینه ری از دل  
 رازش بنهفته هفت اختر \* صیتش بگرفته هفت کشور  
 در انجمن عجم بساطش \* در بادیه عرب سماتش

(b) Write notes on :—

ده عقول - سه روح - صورت - هیولی

3. Describe briefly in your own Persian the story of Nal and Daman.

4. Explain fully in Persian :—

(a) کج دارد مریز ساقی دیر

می بیند مکن حواله بر غیر

حادث بقدم کی بود راه

کتان ز کجا و پرتو ماه

(b) چون عشق علم کشد بعیوق

آتش زن عاشقست معشوق

چون آتش عشق بر فرورزد

(c) لیلی چو بدل پذیرد این زیر

خلخال بدل کند به زنجیر

مجنون چونهد برین فسون گوش

لیلی شود از دلش فراموش

(d) گیرم ز نوای هندی آهنگ

در پهلوی دری زخم چنگ

شمعی که بود انیس سوزم

ز آتشکده فارس بر فرورم

(e) از هستی بخت و نور ساذج  
صد جلوه فراز هفت هودج  
دید آنچه به عقل در نه گنجد  
در دائره نظر نه گنجد

5. Briefly describe in your own Persian the journey of Nal to the land of Daman and his return to his native place with Daman.

## (GROUP A—LITERATURE)

## SEVENTH PAPER

## FIRST HALF

*The figures in the margin indicate full marks.*

1. *Either,* 10

سه نثر ظهوری. Give an account of the life of the author of  
in Persian.

*Or,*

شمسه و قهقهه. Compare the style of سه نثر ظهوری with that of  
Answer this in Persian.

2. Explain the following lines in simple Persian :— 12

اگر بر سوم جهانبانی و قواعد گیتی ستانی و ترتیب رزم  
و بزم و رعایت عزم و جزم که آیتیست در شان او و تشریفی  
بر قد او کما ینبغی قیام و اقدام نماید چه عجب عجب آنست  
که در هر فن مثل ساز و خط و تصویر که ذرفنونان عصر  
قرنها مشق بیقرینگی بر زانوی جد و جهد نشسته منشور هنر  
درست نموده کلاه گوشه تفاخر بر آسمان شکسته اند باندک  
توجهی و در کمتر زمانی علم امتیاز بر افراشته در زبانها  
به تحسین خود سخن نگذاشته شهنشاه هنر آفرین خواندندش  
بیان واقع و مهارتش در صنایع دلیل قدرت صانع خرد  
خرده کار قلم بند نقش پردازیش و عقل رنگ آمیز صدفدار  
صورت سازیش \*

8. Give a short synopsis of گلزار ابراهیم.

8.

Or,

By whom was نورس written ? What does it treat of ? Why was it so named ?

4. Explain clearly in Persian either (a) or (b) :-

10.

(a) جهانگیر و جهان دار و جهان بخش  
فلک قدر و فلک تخت فلک رخس  
کف همت دم شمشیر جرأت  
دماغ هرشمندگی مغز فطرت  
سنانش چون علم سازد سر انگشت  
شود تسبیح ساز از مهره پشت  
بکین چرخ اگر رخ بر فروزد  
نگه در چشم مهر و مه بسوزد  
به مهر از مهر و رزان بر سر آمد  
عرض عشق و دل او جوهر آمد

(b) سخن را بار خاطر بود کوهی  
نبودش صاحب صاحب شکوهی  
عررسی بود از پیرایه عاری  
ز بخت پست خود در شرمساری  
کنونش آسمان در پای بوس است  
سراپا گردن و گوش عروس است  
لالی حقه پرورین سپند است  
خیال شاه والا بس بلند است  
بآن سنگینی از گاه آرد یاد  
که کوه از بار رشک آید بفریاد

5. Write a critical note on the style and diction of سه نظر ظهوری. 10.

## SECOND HALF

*The questions are of equal value.*

*Attempt ANY THREE questions.*

1. Estimate the value of **شمسه و قهقهه** as a book dealing with maxims and rules of life and comment on its style.

2. Summarize the dream of **ملك سرفراز** and give its allegorical significance.

4. (نخل هر عمل را ثمر مکافات دربار و حدیقه هر

فعلى را نسیم پاداشی در کار) \*

Explain fully the above statement and briefly reproduce the story narrated in this connection.

4. Render into simple Persian prose the following :—

در هر قطعه چمن چمن گلهاى الوان شگفته و در  
دوش و آغوش هر شاهد گیاهى خرمن خرمن طرارت  
و تازه روي خفته بتمشايى هر چشمه اش پايى در گل  
حیراني نور رفته نوايى تجرى من تحتها الانهار خالدين فيها  
بگوش هوش جرعه پيمایان کوثر صاف دلی رسیده طوطیان  
شکر شکن و عندلیبان شیرین سخن در بزم هر شاخساری  
قانون ترم و هنگامه جوش و خروش تازه ساز کرده بلبلان  
بنوائی که مغنیان عرب و عجم و عراق و حجاز را دل چو  
صبر عشاق از پرده اختیار خارج افتد بلند آرازه ساخته اند  
که هوايش با دم عیسی توأم و فضايش دلکشتر از نغمه  
ریاض ارم \*

5. Translate into English :—

غرض از تمهید بساط ایراد و تعداد این لطیفه آن بود که  
جویندگان گوهر ارزنده ارتفاع و جاه و مقدار و طالبان  
وصال معشوق دلخواه راحت و اعتبار را لازم بلکه واجب  
است که در طلب راهی شتابند که بسر منزل مقصود توانند  
رسید و در بوستان خاطر نخلی نشانند که از فیض ثمر و سایه



ار منتفع و خوش رقت توانند گردید و در بحر زندگانی عنا  
سفیده احتیاط از قبضه معلم خواهش نفس و طغیان شهرت  
نسپارند تا زورق جمعیت خود را طوفانی چهار موج غرقاب  
خطرات و عقوبات نه بینند و بفریب اهرمن نفس مرحله  
پیمائی بیابان ضلالت و گمراهی نشوند \*

(GROUP A—LITERATURE)

EIGHTH PAPER

*The questions are of equal value*

FIRST HALF

1. Describe and discuss the merits of Ali Hazin as a Persian prose writer.

Or,

Discuss the merits and demerits of Ali Hazin as an autobiographer.

2. Give the context and translate into English *any one* of :—

A.

پس از آن والد علامه سفارش تعلیم و تربیت فقیر بفاضل عارف  
شیخ بهاء الدین گیلانی که از تلامذه سید الحکماء میر قوام علیه الرحمه  
را از گوشه نشینان و جامع فضائل صوری و معنوی بود، نمود -  
چندی در خدمت او تحصیل نموده، قدری از کتاب احیاء العلوم  
و رسائل اسطراب و شرح چغمینی خواندم، و والد مرحوم مرا  
اشارت بمطالعه کتب اخلاق میفرمود، و جمعی از مبتدیان اهل  
تحصیل هر روز حاضر شده قدری اوقات صرف مباحثه ایشان نموده  
انچه را اخذ نموده بودم بایشان میگفتم، و حق تعالی برکت و سعتی  
در اوقات من کرامت فرموده بود و با وجود اشغال کثیره فرصت  
تذکی نمی نمود، و شوق مباحثه و مطالعه چنان مرا بیقرار داشت  
که التفات بلذات نداشتم، مگر در شبها از کثرت بیداری من والدین  
را ترحم آمده مرا نصیحت و التماس باستراحت میکردند و سود  
نداشت، و انچه را بدرس نمیخواندم بمطالعه اخذ نموده مواضع  
مشکله را از والد سوال میکردم، و آنمقدار از کتب مختلفه و فنون

متنبه که در اندک مدتی بمطالعه من در آمد مگر قلیلی علمی  
متتبع را میسر آمده باشد \*

B.

ر از افاضل و اعلام که در ان سفر ملاقات شده فاضل محقق  
میرزا حسن خلف مرحوم مولانا عبد الرزاق لاهیجیست دار دارالمومنین  
قم که موطنش بود در سن کهولت و اواخر حیات سعادت خدمت  
ایشان یافته ام - در علم و تقوی آیتی بود ' مصنفات شریفه دادر چون  
شمع یقین در عقائد دینی و جمال الصالحین در اعمال رساله تقیه  
و غیر آن \*

دیگر از افاضل حاجی محمد شریف بود هم در ان بلده بخدمت  
ایشان رسیده ام ' حارمی فنون ' و مشربی بغایت صافی و ذوقی کامل  
داشت ' دیگر از افاضل سید العلماء میر محمد ابراهیم قزوینیست '  
جامع معقول و منقول و از اتقیا بود ' و در دار السلطنت قزوین  
ایشان را دیده ام ' دیگر سید الافاضل میرزا قوام الدین محمد سیفی  
قزوینیست ' فاضلی تحریر خاصه در فنون منقوله امام بود ' شعر عربی  
و فارسی نیکو گفتی ' و بغایت ستوده خصال بود همداران بلده ادراک  
صحبت ایشان نموده ام ' و این مرد و سید عالیشان تا چند سال قبل  
ازین در حیات بودند و در گذشتند \*

3. Describe briefly حادثه اصفهان و استیلای افغانه .

Or,

State briefly what Ali Hazin says about India.

## SECOND HALF

Answer ANY THREE of the following questions

1. برخی از خصائص ملت ایران همچنانکه در کتاب  
"تجلیات روح ایرانی" ذکر شده در عبارت فارسی سلیس بنویسد \*

یا

مقوله ذیل را شرح دهید و حقیقت آنرا واضح نمائید : —  
"ملت که خصائص ذاتی و ممتاز روح اجتماعی و اخلاق

ملی خود را از دست نداده باشد هستی خود را میتواند محفوظ نگهدارد و در میدان مبارزه زندگی خود را میتواند پافشاری نشان دهد و فیروزمند گردد.\*

2. قدری در خصوص بسط عدل و رعیت پروری نرشیروان بنویسید و قصه نوشزاد پسرش را که درین باب اشارت بآن رفته بیان نمائید \*

یا

برخی از احوال خاندانه محترم برمکیان همچنانکه در کتاب "تجلیات روح ایرانی" ذکر شده در معرض تحریر بیاورید \*

8. (a) رای شما در خصوص کتاب "تجلیات روح ایرانی" چیست؟ آنرا مختصراً ذکر نمایند \*

(b) شرحی مختصر در باب 'نوروز' - 'سده' - 'فرش نوربهار کسری' بنویسید \*

(c) اساس دین زرتشت بر چیست؟ آنرا در اختصار بیان نمائید \*

بر عقیده مصنف کتاب "تجلیات روح ایرانی" چه نتایج از خلافت عباسیان مترتب شده و تاثیر آن در روح ایرانی چه طور پیوسته؟ این مدعا را راضح نمائید \*

یا

مقوله ذیل را تفسیر بکنید: —

"عهد صفویان دوره شکفتن غنچه‌های امید ایرانیان و موسم بهار آمال شیعیان است" \*

5. عبار ذیل را در زبان انگلیسی ترجمه بکنید: —

ایرانیان قدیم علم و معرفت را دوست داشتند و در صنعت و حرفت و مخصوصاً در صنایع ظریفه ذوق و استعداد کامل نشان میدادند - سلاطین ایران نیز از باب فضل و دلالتش را گرامی و محترم

میداشتند. آثاریکه از ایرانیان قدیم از قبیل سنگ نبشته‌ها و ستون‌ها و عمارت‌ها و دخمه‌ها و قصرها و قلعه‌ها و هیكلها و حجارها پس از چندین هزار سال باقی مانده برای اثبات درجهٔ لیاقت و استعداد آنان دلیل روشنیست و با اینکه تألیفات و اثرهای ایرانیان قدیم چندین مرتبه دچار تخریب و طعمهٔ لهیب گردیده باز آثار مختصری که باز مانده ثابت میکند که ایرانیان قدیم در فن موسیقی و ادبیات و نقاشی نیز صاحب ذوق سلیم بوده و ترقیه‌های فراوان کرده بودند \*

## PERSIAN

(OLD SYLLABUS)

### FIRST PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

- |  |    |
|--|----|
| 1. Write in Persian a critical estimate of Sanai as a mystic poet.         | 12 |
| 2. Compare Sanai and Rumi as composers of Mathnavi,                        | 8  |
| 3. Explain and annotate <i>three</i> of the following in simple Persian :— | 15 |

(۱) سر او سورت و نا خوانده

دل او مرکب صفا رانده

گوی بر برده دست منقبتش

پای بر سر نهاده مرتبتش

(ب) گفته او را بوقت رحی و رجل

جبرئیل امین و لا تعجل

بوده چون نقش صورت خویشش

ماجرای غیب در پیشش

(ج) بوده مقصود آفرینش از

انبیا را بسان بینش از

یافته بهر پای خواجه دین

ریت شیر چرم گل زمیں

(د) جان او بډه در طریقت حق  
 گوهر حضرت حقیقت حق  
 زحمت آب و گل درین عالم  
 رحمتش نام کرده فضل قدیم  
 (ه) در احد یا احد یکی بډه  
 درچه یارانش اندکی بډه  
 اهد قومی دران میان گفته  
 در کنارش عقیق ناسفته

4. Translate either A or B into English, adding explanatory notes where necessary :— 10

## A.

آنکه طه طهارتش داده \* و آنکه یاسین امارتش داده  
 طا طلب کرد مرعمر را یافت \* از میان طهاره بروری تافت  
 دل او چون زحق محقق شد \* صدف در رویت حق شد  
 آنکه کامل برقت او شد کار \* بسر نقطه باز شد پرکار  
 داده دستش بصدق طاء طلب \* بسته پایش بعشق هاو هرب  
 کرده بر چرخ حق بنور یقین \* طارها ماه چارده اش در دین  
 شوقش آورده سوی مهتر خویش \* طوقوا طوقوا کفان در پیدش  
 دیده از طا همه طهارتها \* کرد از ها همه عمارتها

## B.

آمد اندر جهان جان هرکس \* جان جهانها محمد آمد و بس  
 چون بخندید بر سپهر جلی \* آفتاب سعادت ازلی  
 آن سپهرش چه بارگاه ازل \* آفتابش که احمد مرسل  
 شرع او را فلک مسلم کرد \* خانه بر بام چرخ اعظم کرد  
 اندر آمد ببارگاه خدا \* دامن خواجگی کشان در پای  
 پیدش روی سجده کرده عالم درون \* زنده گشته چو مسجد ذوالنور  
 دیده جان پاک آدم ازو \* معنی بکر لفظ محکم ازو  
 جان عاقل جهان بدو بیند \* زانش بر جان خویش بگزیند

5. Give the verses of the Quran or the sayings of the Prophet to which any two of the following verses refer :— 5

- (ا) در جهان پیش همتش بدر جو  
سر مازاغ و ما طغی بشنو  
(ب) با فقرضی دل تباه کرا  
بالعمرک غم گناه کراه  
(ج) گاه گفتی جهان مرا  
گاه گفتی اجوع گاه اشبع

## SECOND HALF

Answer Questions No. 4 and ANY TWO of the rest.

1. — معانی اشعار ذیل را بوضاحت بیان کنید :—
- (ا) ز سر کلاه حکومت بدامن تو نهاد  
قضا که هست در عالم بحکم او مجبور  
که این کلاه بصرمان رگوشه بر شکنش  
نه در دو کون توئی آمر و منم مامور  
بعد حکم تو امر قضا چنان منسوخ  
که از نزول کلام مجید حکم زبور  
اگر ز روی ضمیرت نقاب بر خیزد  
برنگ سایه شود آفتاب طامعه نور  
شها توئی که رکوۃ بضاعت کرمست  
دو کون را ز گران مایگی کند معمور  
(ب) سلک فقود نظم جواهر بیاد رفت  
قا صیت گوهر تو بر آمد ز کان علم  
پیش از وجود صلب فلک بود ذات تو  
در بطن صنع نادره را تو امان علم  
امکان اگر نه تکیه زدی بر وجود تو  
کی داشتی تحمل بار گران علم

دست معجزات ستون زلخ شود  
 آنجا که فطرت تو زند سائهان علم  
 علمست جان هر که بود معنوی نهاد  
 الا فطانت تو که گردید جان علم  
 ذات تو اعتدال و سلیمان مزاج عدل  
 عقل تو مغز و جوهر کل استخوان علم

16 اشعار ذیل را شرح بدهید و تلمیحات را راضع کنید: — 2.

این جواهر ز نثار کرمش بر چیدم  
 کس نگوید که بدریوزۀ عمان رفتم  
 دارم این قافله را سرمه ز خاک در تو  
 نبری ظن که بتاراج صفاهان رفتم  
 بسکه عیسی نفسان بوسه براهم دادند  
 هر قدم بر سر صد چشمه حیوان رفتم  
 بال اندیشه ز پرواز شکستم صد بار  
 نبری ظن که بعرش سخن آسان رفتم  
 السلام ای ملک النظم برون داد از خاک  
 چو بآرامگه فاضلم شروران رفتم  
 دارا دوش بدوش قدر اندر ره عمر  
 با ثنای تو و نفرین حسودان رفتم  
 راه بیهوده ثنای تو سپردم این را  
 نیست راهی که توان گفت بیایان رفتم  
 ره نفرین حسودان تو رفتم لیکن  
 آن نیرزد که بگویم بچه عنوان رفتم

مطالب اشعار ذیل را بیان کنید —

نگفت و من بشنودم هر آنچه گفتن داشت  
 که در بیان نگهش کرد بر زبان تقدیم

لبش چو نوبت خویش از نگاه باز گرفت  
 فتاد سامعه در موج کوثر و تسنیم  
 بخنده گفت که در عذر این گناه بزرگ  
 که رفته نام تو بی حکم ما بهفت اقلیم  
 همین که رفتی ازین آستان نوشته بیار  
 گزیده نسخه از زادهای طبع سلیم  
 ازین سخن سرور دستار من گلستان شد  
 ز بسکه چیدم و بر سر زدم گل تسلیم  
 ازین قصیده در صلاح کیست ؟ اسباب تصنیف شدن آن را  
 بیان کنید \*

4. سیرت و رخصت عرفی را از اشعار قصائد از استنباط کنید و اشعار ذیل را بالتقید شرح دهید : — 18

داد یک شهر ز عرفی بستان کین مغرور  
 کبر و نازش نه باندازد قدر است و محل  
 نیم تحسین مکن ارگوید صد بیت بلند  
 که دماغش شده از حسن طبیعت مختل  
 هر سر مویش اگر باز شکالی بخورد  
 سوزناتی است که چیده است در ولات و هبل  
 بهر اصل و نسب خویش نویسد بیرون  
 هر چه خواهد ز نسب نامه ارباب دول  
 گوهر آمای رموز است و نه دریا و نه کان  
 حکمت آموز عقول است و نه علم و نه عمل

5. محاسن قصاید عرفی را بالتفصیل بنویسید - و 16  
 قصاید او را با قصاید شاعری دیگر در فارسی که مطالعه کرده باشید  
 موازنه کنید \*



## (OLD SYLLABUS)

## SECOND PAPER

## FIRST HALF

*The figures in the margin indicate full marks.*

1. Bring out the meaning of the following extracts in simple Persian :— 20

## A.

نکوهش مکن چرخ نیلوفرى را  
 بر دهن کن ز سر باد خیره سرى را  
 هم امروز را پشت بارت بیفکن  
 میفکن بفردا مر این داورى را  
 چو تو خود کنی اختر خویش را بد  
 مدار از فلک چشم نیک اخترى را  
 نگه کن که ماند همی نرگس تو  
 ز بس سیم و زر تاج اسکندرى را  
 درخت ترنج از بر برگ رنگین  
 حکایت کند کله قیصرى را  
 اگر تو ز آموختن سر نتابى  
 بجوید سر تو همی سرورى را  
 بسوزند چوب درختان بى بر  
 سزا خواهی اینست مر بى برى را  
 درخت تو گر بار دانش بگیرد  
 بزیر آدرى چرخ نیلوفرى را

## B.

ز جور لشکر خرداد و مرداد  
 تواند داد ما را هیچکس داد  
 معال است این طمع هیهات هیهات  
 کسى دیدى که دانش داد خرداد

ز بهر آنکه تا در دامت آرد  
 چو مرغان مرا ترا خرداد خورداد  
 کرا خورداد گیتی مرد بایدش  
 از آن آید پس خرداد مرداد  
 همی خواهی که جاریدان بهمانی  
 برین برباد خانه سست بنیاد  
 ازین برباد خانه هم بآخر  
 برون باید شدن ناچار با بباد  
 چه گوئی کاین علوی کوهر پاک  
 بدین زندان و این بند از چه افتاد  
 ترا زندان جهان است و قذت بند  
 برین زندان و این بند آفرین باد

2. Render the following into simple Persian prose, and criticise the rhymes :— 6

در بند مدارا کن و در بند میان را  
 در بند مکن خیره طالب ملک دارا

بری دان ز افعال چرخ برین را  
 نشاید ز دانش نکوهش بری را

این جهان بی وفا را بر گزید و بد گزید  
 لا جرم بر دست خویش از بد گزیده خود گزید

3. Give in Persian, a brief sketch of the life of Hakīm Nāsir-i-Khusraw. Discuss the chief characteristics of his Qasā'id. 14

4. Explain clearly the overlined words and phrases in the following extracts :— 10

در درج سخن بکشی و در بند  
 غزل را در بدست زهد در بد

بآب پند باید شست دل را  
 چو سالت برگذشت از شست و از اند  
 حرارتهای جهلی از حکیمان  
 ز علم و پند گفتشتند ریوند  
 نخستین پند خود گیر از تن خویش  
 و گر نه نیست پندت جز که ترقند  
 ای خواننده بسی علم و جهان گشته سراسر  
 تو بر زمی و از برت این چرخ مدور  
 این چرخ مدور چه خطر دارد زمی تو  
 چون بهره خود یافتی از دانش مضم  
 تاکی تو بتن بر خوری از نعمت دنیا  
 یک چند بجان از نعم دانش بر خور  
 بی سود بود هر چه خورد مردم در خواب  
 بیدار شناسد مزه از منفعت و ضر  
 خفته چه خبر دارد از چرخ و کواکب  
 ما راز چه رنده است برین گوی مغبر

## SECOND HALF

*The questions are of equal value*

*Answer ANY THREE of the following questions*

1. Translate into English, adding explanatory notes where necessary :

خیمه زربفت زد بر چرخ نیلی آفتاب  
 از پرند نیلگون آریخت بس زرین طناب  
 بال بگشود از پس شام سیه صبح سفید  
 همچو سیمین شامبازی از پی مشکین غراب

عنبرین موی شب ار کافرگون شد عیب نیست  
صبح روز پیری آید از پس شام شباب  
تاکه سیمن حلقهای اختران درد ز هم  
خور برون آمد چو زرین تیغی از مشکین قراب  
یا نه گفتمی از پی صید حواصل بچگان  
ز آشیان چرخ بیرون شد یکی زرین عقاب  
یا بجادری فلک در حقه یاقوت زرد  
کرد پنهان صد هزاران مهره از در خوشاب

2. Explain in Persian with reference to the context any four of the following :—

- (a) گاهی چو کرم پيله کشی طیلیمان بسر  
گاهی ز روی حیلہ کنی پیرهن قبا  
(b) ردای قدس پوشیده بهضم نفس کوشیده  
ببزم انس نوشیده می وحدت ز جام لا  
(c) ناظم هر چار گوهر داور هر پنج حس  
مالک هر هفت دروخ فاتم هر هفت باب  
(d) چون موسی کلیم بیک چوب دست کرد  
ملکی ز ملک مصر فزون تر مسخرا  
(e) رستم عید از برای چشم کاؤس بهار  
نرشدار از دل دیو خزان می آورد

3. Give in simple Persian the substance of one of the following :—

A.

گر تاج زر نهند ازین پس بسر مرا  
بر درگه امیر نه بینی دگر مرا  
او باز تیز پلجه و من معده ضعیف  
روزی بهم فرور شکند بال و پر مرا  
لو آفتاب روشن و من ذره حقیر  
با نورش از وجود نیسانی اثر مرا

ار گنج شایگان و منم آن گدا که هست  
 بر گنج باز دیده حسرت نگر مرا  
 بی ازدها چگونه بود گنج لاجرم  
 از بیم جان بگنج نباید گذر مرا  
 عزت چو در قناعت و ذلت چو در طمع  
 باید قناعت از همه کس بیشتر مرا  
 من آن همای اوج کمالم که بد مدام  
 سیمرغ رار قاف قناعت مقرر مرا

B.

هادی خود نفس سرکش را گزینم ای شگفت  
 گر چه صد کرت شنیدستم اذا کان الغراب  
 از نکوکاری مرا بر سر چه آمد کاین زمان  
 سر بدننامی برآرم در میان شیخ و شاب  
 از خدا رز خویش شرمم باد آخر تا بکی  
 روح را از اطوار ناشایسته دارم در عذاب  
 آفتابم من چرا جان را بکاهم چون هلال  
 شاهبازم من چرا بیغاره یابم از ذباب  
 من که برگردون زخم خرگاه دانش از چه رو  
 برگلوی جان چو میخ خرگم باشد طناب  
 اهرمن خونم بریزد سوی آن پویم شگفت  
 غافل از پیرش میعاد و از روز حساب  
 مرغ جان را تا بکی محبوس دارم در قفس  
 چهره توفیق را تا چند پوشم در اضطراب

4. Annotate in Persian any two of the following :—

A.

رموز علم ادبسی بود ذوقی نه تدبیری  
 چه داند ذوق ابلیسی رموز علم الاسما

زهی یزدان ثنا خوانست در گیتی خوان احسانت  
 خهی فتراک فرمات جهان را عروۃ الوثقی  
 ستاره میخ خرگاهت زحل هندوی درگاهت  
 زبیم خشم جان کاهت فلک را رنج استرخا  
 بسر از لطف حق تاجت طریق شرع منهاجت  
 بساط قرب معراجت فسبحان الذی اسری  
 مهین نوباره آدم بهین پیـرایه عالم  
 چو خیر المرسلین معصوم بخلوت گاه ار ادنی

B.

گوئی بخود که رب ز چه رفته است در حجاب  
 رانی بدل که حق ز چه مانده است در خفا  
 گر زانکه هست حکمت پنهان شدن کدام  
 در زانکه نیست پیـرر فرمان شدن چرا  
 تا چند مکر و دغدغه ای دیو زشت خو  
 تا چند کفر و سفسطه ای مست ژاژخا  
 بر بود من دلیل بس این چرخ گرد گرد  
 بر ذات من گواه بس این دیر دیر پا  
 گرینده بپاید تا دف کند خروش  
 گرینده بپاید تا که دهد صدا.

C.

گفتا بفصل دی که سخن بفسد بگام  
 گوئی سفر کنم نکلم هیچ بار را  
 حاشا که رحی صادق دالم حدیث تو  
 نه خود تو جبرئیلی نه ر من پیمبرا  
 فصلی چنین که گوئی از پرف کوهسار  
 ز استبرق سفید بسر کرده معجرا

فصلی چنین که گوئی کردند تعبیه  
تأثیر پشت سوهان در طبع صرصر  
بالله اگر نگاه برون آید از در چشم  
چون سنگ بفسرد بمیلان ره اندرا

5. Compare and contrast Qā'ānī and 'Urī as Qaṣīda-writers.

(OLD SYLLABUS)

THIRD PAPER

FIRST PAPER

*The figures in the margin indicate full marks*

1. "بدانکه جنس اختلاف علما در معارف الهی 10  
منحصر در متکلمیت و حکمیت است" \*

Discuss fully the above statement.

Or,

What difference does the author of Gowhar-i-Murad draw between  
- ادراک and علم - معرفت - شناخت - دانش - Give examples.

2. How did اشعریه and معتزله come into existence? What are 10  
the principal views of each school?

3. Explain the terms جوهر and عرض. Enumerate and Explain 6  
the varieties under each.

4. Prove that the centre of the universe is the Earth as discus- 6  
sed in Gowhar-i-Murad.

Or,

Explain any four of the following terms:—

کلیات خمسہ - هیولی - نوع اضافی - قیاس اقترانی -  
عرض اضافی - قارالذات - کم متصل \*

5. Write a critical note on the style and diction of ابوالفضل 8  
With what other prose writers ca you compare him?

6. Render one of the following into simple Persian :—

10

A

سیما ساکنان آن خیر البلاد و موطنان آن احسن البقاع  
 علی الخصوص زمره منتسبان خاصه آن موقف مقدس که  
 محل ورود جنود ملائک و غایت مقصود صدر نشینان  
 متکین فیها علی الارائک است مشمول فیوض و عوطف  
 ما باشند بناءً علی هذا قرار یافته که هر سال یکی از  
 ملازمان درگاه خلایق پناه که بمزید حسن ظن متصف بوده  
 باشد میر حاج ساخته ادرات و انعامات از نقود و اجناس  
 بقدر تفاوت درجات و تناسب طبقات میفرستاده باشیم چون  
 در سنه تسع و ثمانین و تسعمائه بعضی نمک‌رامان قدم  
 از جاده اطاعت بیرون نهاده باعث تفرقه عباده الله گشته  
 لهذا نتوانستیم بان عمل نمائیم \*

B

المنه لله که از آغاز ابتسام صبح اقبال طلوع نیراجلال  
 که مبدای جلوس بر اورنگ سلطنت است تا امروز که  
 عوالم سعادت انتظام خلافت بار بعین پیوسته و در نظر  
 دوربین عنوان ریعان بهار دولت و اهتزاز ریحان حدیقه  
 افضال است همگی همت فلکی اعتصام به تکمیل و ترتیب  
 مستعدان هر صنفی سیما معترفان بحکام علوم و حکم بوده  
 و علی الدرهم مستکملان هر فریق در حواشی سرور والا  
 بمطالب عالیله رسیده کامیاب صورت و معنی گردیده اند  
 درین هنگام که صیت فضائل و کمالات کسبی و رهبی افادات  
 اتصاف جامع الکملات چلبی بیگ مکرر بسمع اشرف رسیده  
 توجه معلی بطلب او ظهور یافت \*



## SECOND HALF

The questions are of equal value.

Answer THREE questions.

1. عبارت ذیل را بحواله متن کتاب شرح دهید: —

زینب از شادی پیخورد افتاد ، چه در عمر خویش نه شعری بدان خوشی و نه آوازی بدان دلکشی و نه سازی بدان سازگاری شنیده بود ، غافل ازینکه هر در بدبختیم ( از کنیزی است سیاه روز و من بنده روسیاه ) - گویا آنچه در جلو ما ست از این پدر و مادر هست ، و گویا مستی این شراب تا قیامت بجاست ، بعد از خواندن چندین غزل موزون پیمودن چندین ساعر گلگون کیسه اشعار خالی و شیشه شراب تهی گردید \*

2. معانی عبارت ذیل را راضع نمائید: —

و طائفه ملائکه اگرچه مخصصند برتبه روحانیت و مبتهج و مسرورند بلذات عقلیه و انوار علمیه و لیکن در عالم جسمانیت که یکی از عوالم پروردگار است ایشانرا تسلطی نیست و اجسام فلکیه اگرچه بنابر قواعد حکما صاحب نفوس مجرده هستند اما آنها را از اوصاف متضاده و طبائع مختلفه خبری نه ، نارل هولناک و راه های خطرناک طی نکرده اند و سنگلاخهای نزل و جدال قری را از پیش بر نداشته اند ، بازگران تقلب در اطوار نقص و کمال بردوش نکشیده اند ، زهر جانگزی از انقلاب صفات و احوال را نپشیده اند بخلاف انسانی که چون بمرتبه کمال رسد احاطه بجمیع مراتب نموده و سیر در طورهای مختلفه کرده و عالم جماد و نبات و حیوان و ملائکه را در نور دیده و بمرتبه مشاهده وحدت رسیده \*

3. از عبارت بالا معانی الفاظ ذیل را راضع بکنید: —

لذات عقلیه - نفوس مجرده - اوصاف متضاده -

(b) اصطلاحات ذیل را تعریف نمایید : —

کمال نفس - خلافت الهی - عدالت -

عبارت از قوۀ عقلیه و قوۀ رهمیه چیست ؟ فرق 4.  
میان آن در چیست ؟ وظائف هر یکی از آنها را تعیین بنمائید \*

5. سطور ذیل را مفصلاً شرح بدهید : —

از برای هر فضیلتی حدیست مضبوط و معین که بمنزله  
وسط است و تجاوز از آن خواه بجانب افراط و خواه بطرف  
تفریط مؤذیست بر ذیل، پس هر صفت فضیلتی که وسط  
است بجای مرکز دائره است و اوصاف رذیله بمنزله سائر  
نقطهائیست که در میان محیط فرض شود، و شکی نیست که  
مرکز نقطه ایست معین و سائر نقاط متصوره در اطراف و  
جوانبش غیر متناهی اند، پس بنابراین در مقابل هر صفت  
فضیلتی اوصاف رذیله غیر متناهی خواهند بود \*

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(OLD SYLLABUS)

FOURTH PAPER

*The figures in the margin indicate full marks*

FIRST HALF

1. Translate into Persian A and any one of B or C :—

50

A

The estimate of an enemy as well as a friend deserves attention. Let them consider well what are the characters which they bear among their enemies. Our friends often flatter us, as much as our own hearts. They either do not see our faults, or conceal them from us or soften them by their representations, after such a manner that we think them too trivial to be taken notice of. An adversary, on the contrary, makes a stricter search into us, discovers every flaw and imperfection in our tempers; and though his malice may set them in too strong a light, it has generally some ground for what it advances. A friend exaggerates a man's virtues, an enemy inflames his crimes. A wise man should give a just attention to both of them so far as they may tend to the improvement of one and the diminution of the other.

## B

Aurangzeb continued for many years to occupy the throne of the Mogul dominion, which, under him, attained to its greatest extent and its highest glory. After he had added to it the Kingdoms of the Deccan, it included nearly the whole peninsula of India, which the neighbouring regions of Cabul and Assam,—territories, the population, and wealth of which probably exceeded those of the Roman empire during its most flourishing period. The revenues amounted to 32 millions sterling, which, though inferior to the immense income of one or two modern European States, was then probably unexampled. His internal administration seems to have been decidedly superior to that of his immediate predecessors. Amidst the somewhat ostentatious display and matchless splendour of his Court, his personal conduct remained pure and even austere; he neither allowed to himself, nor permitted in his palace, any species of disorder or licentiousness.

## C

A little before sunset, having reached the top of a gentle rising, I climbed a high tree from the topmost branches of which I cast a melancholy look over the barren wilderness, but without discovering the most distant trace of a human dwelling. The same uniform prospect of shrubs and sand everywhere presented itself, and the horizon was as level and uninterrupted as that of the sea. Descending the tree I found my horse devouring the stubble and brush-wood with great avidity, and as I was too faint to attempt walking and my horse too much fatigued to carry me, I thought it but an act of humanity and perhaps the last I should ever be able to perform, to take off his bridle and leave him to shift for himself in doing which I was suddenly seized with sickness and giddiness, and falling on the sand felt as if the hour of death was fast approaching.

## SECOND HALF

1. Translate into English *any two* of the following :—

30

(a) صنایع مستظرفه و آزاد که نقطه نظر صوری وسیله زندگی روح یعنی وسیله تغذیه، پرورش، ترقی و تعالی روح انسانی است برشته‌های پنچگانه ذیل که ترتیب تقدم تاریخی و مرتبت خویشاوندی در آن مراعات شده منشعب میشوند : معماری، حجاری، نقاشی، ادبیات، موسیقی — ادبیات : حس مدح و تحسین شجاعان، زیبایی طبیعت، بروز شوق و وجد مجالس جشنی که ضرورتاً متعاقب فتوح لازم می آید، بالآخره راز ر نیازی که زائیده شعله عشق است اختصاصاتی بزبان معمولی داده یعنی در هر یک از مواقع فوق کلمات بیانات تشبیهات ایهامات و کنایات بکاررفته تا بتدریج زبان ناهموار عالم با ظرافت و تشبیهات نغز آمیخته مرتبت خاص یافت ازین مختلفه نظم و نثر، فلسفه انسانه، حکایت و تاریخ و غیره جلوه نمود \*

(b) ما از کوشیدن میترسم، ماها کار نکرده مزد میطلبیم و رنج نبرده می خواهیم گنج برداریم و از آنجا که حرفهای ما با عملی همراه نیست و در پیش و پس خود تکیه گاه عملی ندارد اینست که حرفهای ما رزنی پیدا نمیکند ولی در میان ملل دیگر بعضی حرفها و مثلها زده شده است که چون از زبان یک ملت زنده و کارکن جاری شده بقدر کوههای هیمالایا وزن دارد و هرگز از وزن خود نمیکاهد - یکی ازین حرفها که چکیده حکمت و سر سعادتش باید نامید سخن یک حکیم آمریکائی است که میگوید "بکوش یا بمیر" این جمله حکیمانه تا جهان باقیست معکوس کاینات و دستور حیات خواهد بود \*

(c) ملیت ما ایرانیست است و ایرانیست همه چیز ما ست : افتخار ما، شرافت ما، عظمت ما، قدسیت ما، ناموس ما، و حیات ما - اگر ما ملیت را معکوس آمال و اعمال خود قرار بدهیم از "بی همه چیزی" خلاص شده دارای همه چیز خواهیم شد - ماها پیش از هر چیز باید ایرانی باشیم و ایرانی نامیده شویم و ایرانی بمانیم - ایرانیست یک کلمه مقدس و جامعی است که تمام افراد ملت ایران را بدون تفریق مذهب و زبان در زیر شهبز شهادت گستر خود جای میدهد - هر فردیکه خون آریائی در بدن دارد و خاک ایران را وطن خود میشمارد خواه کرد و بلوچ و خواه زرتشتی و ارمنی باید ایرانی شمرده و ایرانی نامیده شود \*

2. Translate into English and give short explanatory notes where necessary :— 20

گم شد رهم بدشت نشان قدم کجا ست  
فرسوده شد قدم ز تگاپو حرم کجا ست  
بال و پرم بساحت بیگانه پاک ریخت  
آن شاخسار انس که سوش پرم کجا

مسکین ستارگان شبم طعنه میزنند  
 شمشیر برق زای شه صبحدم کجا ست  
 تفسیر دخی و باطن تنزیل گو مخوان  
 ما را سر مباحث پر پیچ و خم کجا ست  
 شوریده را که باز نداند سر از قدم  
 امکان فحص و بحث حدیث و قدم کجا ست  
 کیهان زبون قوه بی مشعر قضا ست  
 کس را مجال دم زدن از بیش و کم کجا ست  
 در کشور وجود بجائی نرفت راه  
 آن ره که میرود بدیار عدم کجا ست

(OLD SYLLABUS)

FIFTH PAPER

FIRST HALF

*The figures in the margin indicate full marks.*

1. What do you understand by the term عروض ? Give the 8  
 different meanings of the term, and state which in your opinion seems  
 to be correct.

2. Define رومی and ردیف - قافیه . Give examples. 8

Or,

What is رکن ? Into how many parts is it divided ? Name the  
 parts under each head.

8. Scan any three of the following hemistiches and name their 9  
 metres :—

- (a) برد فریاد سیفی در غمت از دست تنهائی \*
- (b) کیست کانرا راحت و رنج اندرین دنیا نگشت \*
- (c) اگر خواهی که گل بینی رخ خود را تماشا کن \*
- (d) دوش مرا تافت نور عقل بر وزن \*
- (e) ما برفتیم و تو دانی و دل غمخور ما \*

4. Discuss the difference between علم بیدای and علم صنایع و بدایع . 1

Or,

Discuss the characteristics of صنایع معنوی and صنایع لفظی .

5. Define any four of the following and give examples :— 8

مراعاة النظير - براءت استهلال - تجنیس مطرف

طباق - حسن تعلیل - اشتقاق

6. Describe with illustration the different kinds of لف و نشر 9

## SECOND HALF

*The questions are of equal value*

*Answer ANY FOUR questions*

1. Write short notes on any two of the following :—  
Avesta; Pahlawi; Modern Persian.
2. Discuss the effect of the Arab invasion on the language and literature of Persia.
3. How does trade affect the language of a country? Adduce philological evidence in support of Persian trade with India and China.
4. Indicate very briefly the indebtedness of Persian to Sanskrit.
5. Explain the etymology of any eight of :—

نیلوفر - کلاغ - خم - پنجاه - جمجاه - بانگ - نوشیروان -

پهلوی - شتر - زندیق - پرنیان - فغفور \*

6. Give six onomatopœic and six Mongolian loan-words in Persian, tracing them to their original forms.

## (OLD SYLLABUS)

### SIXTH PAPER

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE of the following questions*

1. Name four of the earliest Persian prose works and describe them fully.
2. Compare Daqiqi with Firdausi. What does Firdausi himself say of his predecessor? Do you agree with or differ from him, and why?
3. Give a short sketch of Muizzi's life and describe how he met his death. Argue in detail.
4. Give the chief characteristics of the Rubais of Khayyam, and account for the fact that they are better appreciated by the Europeans than by his own countrymen.
5. Sketch briefly the life of Anwari, and give an estimate of his poetry.

## SECOND HALF

*Answer THREE questions*

1. Name one of the leading Persian poets who flourished at the time of Timur. Estimate the value of his contribution to lyric poetry.
2. Write a critical note on the art of Qasani's poetry. What in your opinion are the most obvious features of his composition?
3. Institute a brief comparison between Hafiz and Naziri as composers of ghazal. Illustrate your remarks with examples.
4. Estimate the value of the *مجمع الفصحا* or the *شعر العجم* as a source of the literary history of Persia.
5. Describe the political condition of Persia during the first half of the 16th century A.D. Say how far the environments and the history of this period have influenced Persian Sufi poetry.

(OLD SYLLABUS)

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

1. Describe the causes of the easy conquest of Mecca by Maḥammad, and discuss its importance in the history of Islam.

*Or,*

Describe briefly and discuss the services of Abū Bakr to the cause of Islam.

2. "Alī was wise in counsel and many an adage has been attributed to him. But, like Solomon, his wisdom was for other than himself."

Discuss the above statement with reference to the career of 'Alī as a caliph.

*Or,*

Describe the character of 'Umar II and discuss his policy.

3. Describe and discuss the career and the character of 'Abdu'l-Raḥmān al-Dākhil.

*Or,*

Describe briefly the main achievements of al-Mu'iz-li-Dinillāh.

## SECOND HALF

*Attempt ANY THREE of the following questions*

1. Throw some light on the relations of the Mughal and the Safawide courts.
2. 'The administration of India during the early Mughal period was based on Persian models.' Discuss.
3. 'The tyranny of the Qāchār period brought about the Persian Revolution.' Discuss.
4. Give a short sketch of the rise and fall of the Buwayhide dynasty in Persia.
5. Describe briefly the career and achievements of Alp Arslan.

## (OLD SYLLABUS)

## EIGHTH PAPER

*The figure in the margin indicates full marks*

Write an essay in English or Persian on any one of the following :— 100

(a) The origin and development of historical literature in Persian.

(b) Rubai—its origin and development—and peculiar features as distinguished from other forms of poetry with a comment on the Rubaiat of Omar Khayyam.

(c) ز شیر شتر خوردن و سوسمار

عرب را بجائی رسید ست کار

که تلج کیان را کند آرزو

تغور بر تو ای چرخ گردان تغو

(d) آزموده را از مودن جهل است

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## BENGALI

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Attempt ANY THREE questions*

1. Trace the influence of Buddhism on the earliest literature of Bengal, and describe how the Pauranic influence brought about a change in its subsequent development.
2. Give an account of Kirtibas and his Ramayana. How far, in your opinion, does it bear traces of Vaishnava influence?
3. Mention the names of three of the most notable Vaishnava poets of the Post-Chaitanya period, and discuss some of the important features of the poetry of that period.

4. Write critical notes on *any two* of the following :—

- (1) Ramai Pundit,
- (2) Sanjay,
- (3) Dasarathi Roy,
- (4) Nidhu Babu.

5. Review briefly the Manasá poems of Bengal, with special reference to two of the most important poets.

### SECOND HALF

1. (a) Why are the Vaishnava lyric-masters called *Mahdjans*? Trace the mystic element in Vaishnava poetry.

Or,

(b) Compare and contrast Vaishnava conception of love with the spirit that inspires the love-poems in East Bengal Ballads, stressing points of similarity and difference.

2. (a) Give a short account of the life and teachings of Chaitanya, indicating his place amongst the world's great apostles of faith.

Or,

(b) Describe the leading sects of the Sahajias in Bengal, giving an account of their founders and of the tenets they preached.

3. (a) Give an account of the religious career of Shyamananda and of his work in Orissa.

Or,

(b) Give your estimate of the poetical powers of Chandidas and Vidyapati, and prove by an analysis of their poems which of them in your opinion is the better of the two.

### SECOND PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

*Answer Questions Nos. 1 and 2, and ANY ONE of the rest*

1. Give the sense of the following in Bengali, and comment on the formation of words underlined :—

- (a) কইসনি হালো ডোবী তোহোরি ভাভরিআলী ।  
অন্তে কুলিণ অণ মার্থে কাবালী ॥
- (b) পঞ্চ তধাগত কিঅ কেডুআল ।  
বাহঅ কাঅ কাহ্লিল মাআজাল ॥
- (c) তু লো ডোবী হার্ড কপালী ।  
তোহোর অস্তরে ঘোঞ বলিলি হাড়েয়ি মালী ॥

2. Explain fully with reference to the context :—

9+9

- (a) ভানর মাসের ভিথি চড়ুখীর রাতী ।  
 জল মাথোঁ দেখিলোঁ মো কি নিশাপতী ॥  
 গুরুর আসনে কিবা চাপিআঁ বলিলোঁ ।  
 জলের আখর কিবা ভূমিত লেখিলোঁ ॥  
 খণ্ড বিচনীর কিবা পাখ তুলী লৈলোঁ গাএ ।  
 তে কারণে কাহাঞিঁ বাঁশী চুরী নোষাএ ॥

Or,

আনেক যতন করি আলেচিআঁ কাজে ।  
 বাঁশী নির্মিল আন্ধে গোকুল সমাজে ॥  
 এবেঁ কে না নীল মোহন বাঁশে ।  
 ছুই তার ঝাঝা পাট খোপ ছুই পাশে ॥  
 মাগিকে খঞ্চল তথি শোনার পাতা ।  
 সুরপতী জাণে যোর বাঁশীর বারতা ॥

- (b) কাহু না চিহ্নিলোঁ খাইলোঁ আখী ।  
 চান্দ সুরজ ছুরি মাখী ।  
 একপ যোবন কাহেরেঁ থুয়িবোঁ রাখী ॥  
 বাঁশী বাজায়িল যবেঁ কাহে ।  
 কোকিল কৈল পালি গানে ।  
 আশুনি জালিল দেহে তখন দক্ষিণ পবনে ॥

Or,

শব্দু সদৃশ তোর খোম্পা                      তাত দিল বেড়িআঁ চম্পা  
 সিসত সিদ্দুর নব সুরে ॥  
 মিলি হেমকরগণে                      বাক্সিল আতি যতনে  
 যেন বধু রতনক রতনে ॥  
 মণি কিরণ উজ্জলে                      আকন তুজ যুগলে  
 পহ্নায়িল আতি কুকুলে ॥

3. What idea have you formed about the nature of the doctrine treated in the Caryyāpadas? How is it related to the Advaita theory of Saṅkara? 16

4. Discuss the statement that the language of the Caryyās has the genuine vernacular of Bengal at its basis. 16

5. Vaiṣṇavas preach that Rādhā symbolises Mahābhāva. Do you find this maintained in the picture of Rādhā as depicted in the Śrī-Kṛṣṇa-Kīrtana? 16

## SECOND HALF

*Answer Questions Nos. 1 and 5, and ANY ONE of the rest*

1. Explain fully with reference to the context :—

6+6

- (a) বড় পুণ্ডর নাগি দিল দীর্ঘি আর জাজাল ।  
 সোনাকুপাএ গড়াগড়ি না ছিল কাকাল ॥  
 হীরামনমাণিক্য লোক তলিতে সুখাইত ।  
 কাহার পুঙ্কণীর জল কেহ না খাইত ॥  
 কাহার বাটীতে কেহ উদারে না জাইত ।  
 সোনার ঢেপুয়া নৈয়া বালকে খেলাইত ॥  
 মেহারকুল বেড়িছিল মূলি বাপের বেড়া ।  
 গৃহস্থের পরিধান সোনার পাছড়া ॥
- (b) মৈশ্চের গোয়েত দিলা পহরি উন্দুর ।  
 বিলাল পহরি দিলা ঘনপত্র দুধ ॥  
 সুখারের হস্তে তুষ্টি সমর্পিলা তরু ।  
 ব্যাঘ্রের সমুখে জেন সমর্পিলা গরু ;  
 শূকরের হাতে তুমি সপিআছ গেজা ।  
 মানকচু সপিআছ জখ সব সেজা ॥  
 মৈশ্চ সমর্পিলা জেন চণ্ডালের হাতে ।  
 সুখুনা কাষ্ঠ সমর্পিলা আনল সাক্ষাতে ॥

Or,

জাতা দিয়া কেশ বাক্সিল দৃঢ় করি ।  
 সোনার চাকি পরে কাণের উপরি ॥  
 চক্ষু যেন নীলোৎপল দেখিতে পরতেক ।  
 পরম স্নানর পরে স্নবর্ণের ঠেক ॥  
 নাসিকা হারাণ যেন তিলফলের চাতুরী ।  
 তাহার ঘরে চাঁদে যেন করিয়াছে চুরি ॥  
 ইহারে গঠিলা বিধি করিয়া নানা ছাঁদ ।  
 ইহারে নিছিয়া ফেলাই কোটি কোটি চাঁদ ॥

2. Point out the characteristics of the Maṅgala Kāvya with special reference to Maṅgalā Maṅgala. 13

3. Reproduce the picture of Maṅgalā and of Netā the washer-woman as drawn up by Vijaya Gupta. 13

4. What idea have you formed about the social, political, and religious conditions of the country as described in Gorakṣa-Vijaya and Gopichandrer Pāñcālī? 13

5. Explain the following, clearing allusions and adding notes wherever 12+13 necessary :—

- (a) আগম-বেঅ-পুরাণে পণ্ডিও মান বহন্তি ।  
পঞ্চক সিরিকল অলিঅ জিম বাহেরিত ভুমন্তি ॥

\* \* \* \*

আজি ভুম বঙ্গালী ভইলী ।  
শিঅ ঘরিণী চণ্ডালী লেলী ॥

\* \* \*

কাআ তরুবর পঞ্চ বি ভাল ।  
চঞ্চল চাঁএ পইঠো কাল ॥  
দ্বিট করিঅ মহাসুহ পরিমাণ ।  
লুই ভগই গুরু পুচ্ছিঅ জাণ

- (b) পুতনার গ্রাণ লৈলৌ আতি শিঙকালে ।  
সকট আশুর মোএঁ দলিলৌ হেলে ॥  
জমল আজ্জুন রাধা হুঙ্গ আশুর ।  
তাহারো পরাণ লইা নিলৌ বমপুর ॥  
দাতা বলি ছলিআ মো নিলৌ পাতালে ।  
করে গিরি ধরিআ মো রাখিলৌ গোকুলে ॥  
বেদ উদ্ধারিতে কৈলৌ মীন অবতার ।  
পাতাল গিআ তার করিলৌ উদ্ধার ॥  
অশুর-কুল-দলন হরি মোর নাম ।  
এবে তোর তরেঁ কৈল অবতার কাহ ॥

### THIRD PAPER

#### FIRST HALF

*The figures in the margin indicate full marks*

*Answers to be given in Bengali*

1. Answer one question from each of the following groups :—

26

(A) (i) What are the chief sources and characteristics of the Chandi-mangal poems?

(ii) What are the literary and linguistic values of Kavikankan Mukundaram's Chandikavya?

(B) (i) What glimpse of Bengali life do we get from a perusal of the East Bengal ballads?

(ii) To what extent did Sanskrit influence shape the character of the ballads? Discuss incidentally the question of the age of the ballads.

2. Explain any four of the following passages with reference to the context, giving notes on words or allusions where necessary :— 16

- (a) আহিলাম একাকিনী বসিয়া কাননে ।  
আনিলা তোমার স্বামী বাকি নিজ গুণে ॥
- (b) হুঃখ কর অবধান হুঃখ কর অবধান ।  
জাহ্নু ভাহ্নু কুশাহ্নু শিঙের পরিজ্ঞান ॥
- (c) মেঘ আরা আষাঢ়ের রহইদ গায়ে বড় জালা ।  
ছান করিতে জলের ঘাটে যায় যে একেলা ॥
- (d) জুহরী জহর চিনে বেনে চিনে সোনা ।  
গীর প্যাগাঘর চিনে সাধু কোন জনা ॥
- (e) ঘেষের সঙ্গে চান্দ্রের ভালাই কতকাল রয় ।  
কণে দেখি অন্ধকার কণেকে উদয় ॥
- (f) জেমন তিলকপানী তেমন অসত্যবাণী  
সত্যবাণী তিলক চন্দনে ।  
রজকের স্ত্রী কথ। পরিক্ষা করিয়া সিতা  
পুনর্ব্বার পাঠালা কাননে ॥
- (g) নাহিক বাউড়ি ডেড়ি রয়া বস্তা দিহ কড়ি  
ডিহিদারি নাহি দিব মেসে ।  
জত বেচ চালু ধান তার নাহি লব দান  
অঙ্ক নাহি বাড়াব বিবেসে ॥
- (h) আষাঢ় মাস্তা বাশের বেরুল মাটি ফাট্যা উঠে ।  
সেই মত পাও ছইখানি গজদমে হাটে ॥

3. Compare and contrast in Bengali a typical Mangal Kavya with a typical ballad.

### SECOND HALF

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Answer two of the following questions, of which No. (iv) shall be one. Give illustrations from the texts in support of your answer :— 26

(i) Give a general estimate of Madhusudan's poetry, especially of his power of adapting language to sentiment.

(ii) Comment upon the extreme 'Subjectivity' of Rabindranath's poetry, and discuss the merits or demerits of 'subjectivity' in poetry in general.

(iii) Distinguish clearly between the characters in one of the following pairs :—

(a) রাবণ and হুজ, (b) প্রমীলা and ইন্দুবাবা ।

(iv) Give an analytic treatment of the dramatic structure of the PRAPHULLA, and show how the *Conclusion* can be argued from the elements laid in the first scene.

2. Explain, with reference to the context, *any four* of the following extracts, pointing out allusions, figures of speech, traces of influence, inner significance or general bearing in literature, wherever possible — 16

- (a) যথা দেবতেজে জন্মি' দানবনাশিনী  
চণ্ডী, দেব-অস্ত্রে সত্ৰী সাক্ষিলা উল্লাসে  
অট্টহাসি', লক্ষাধামে সাক্ষিলা নৈরবী  
রক্ষকুল-অনৌকিনী—উগ্রচণ্ডা বশে ।
- (b) হাহাকার রবে  
ডাকিহু বাসবে, চন্দ্রে, পবনে, তশনে ;  
কেহ না আইল ; ভস্ম হইলু সত্বরে !  
ভয়ে ভক্সোত্তম আমি ভাবিয়া ভবেশে ।  
ক্ষয় দাসে, ক্ষেমক্ষরি, এ মিনতি পদে ।
- (c) শুনি গৃহ তজ্জ হরিগান তুলি,  
ছাড়ি তুষ যজ্ঞ উর্দ্ধে বাহু তুলি,  
পঞ্চতালে ঘন বাতি করতল,  
নাচিত নারদ, হরিষে বিহ্বল,  
আনন্দ-সলিলে ভিজায়ে কায় ।
- (d) যুগে যুগে এসেছি চলিয়া  
অলিয়া অলিয়া  
চুপে চুপে  
রূপ হতে রূপে  
প্রাণ হতে প্রাণে ।  
নিশীথ প্রভাতে  
বা কিছু পেয়েছি তাতে  
এসেচি করিয়া ক্ষয় দান হতে দানে,  
গান হতে গানে ।
- (e) মা, তোমার এ কোন্ দেশী বিচার ।  
আমি কেঁদে বেড়াই পথে পথে,  
দেখা দাও না একটি বার ।  
মদ খেয়ে বেড়াস ধেরে, কে জানে কেমন যেরে,  
কোলের ছেলে দেখ'লিনি চেয়ে ;  
আমিও মাতৃবা মদে, মা বলে ডাকবো না আর ।

(f) “রাম রাম, এমন কথা যুখে আন ? চন্দ্রে কলক আছে, তবু যেজবোরে কলক নেই ; ঠাকুরপোর জন্তে ও তিন দিন খায় নি। ছেলেশাহু.....আফ্লাদে আটখানা হয়ে বলতে এসেছে।”

“তুমি জান না, তুমি জান না, ছেলেকে বিষ খাওয়াতে এসেছে।”

(g)

ভক্তকণ

হুঃখের বোঝাই শুধু বেড়ে যায় নূতন নূতন ;

এ জীবন

সতর্ক বুদ্ধির ভায়ে নিমেষে নিমেষে

বৃদ্ধ হয় সংশয়ের শীতে পরকেশে।

3. Elucidate, in your own words, the central idea of either of the following :— 8

(a)

“জীবন যখন ছিল ফুলের মত

পাপড়ি তাহার ছিল শত শত।

বসন্তে সে হ’ত যখন দাতা

ঝরিয়ে দিত ছ’চারটে তার পাতা,

তবুও যে তার বাকী রইত কত।

আজ বুঝি তার ফল ধরেছে, তাই

হাতে তাহার অধিক কিছু নাই।

হেমন্তে তার সময় হ’ল এবে

পূর্ণ করে আপনাকে সে দেবে,

রসের ভায়ে তাই সে অবনত।”

(b) আমাদের সাহিত্যের আর একটি উন্নতি এই যে, আমাদের সাহিত্যে প্রত্নতত্ত্বের আলোচনা হইতেছে। সেই সকল পাঠ করিয়া আমরা জানিয়াছি, বেদ ঐশ্বর-প্রণীত নহে, কবকের গান-বিশেষ ; পুরাণ-তন্ত্র প্রভৃতি ঋষি-প্রণীত নহে, প্রাচীনও নহে, নিতান্ত আধুনিক ; বৌদ্ধ-ধর্ম-প্রাচুর্যবাবের কালই ভারতের উন্নতিকাল, ঐ সময়েই জ্ঞান, ধন, শিল্প, বাণিজ্য, স্থাপত্য, সকল বিষয়েই উন্নতি হইয়াছিল ; আমাদের পূর্ব-পুরুষের নিবাস ভারত-ভূমিতে নহে, কোন পবিত্র বংশেও আমাদের উদ্ভব নয়। তাঁহারা অজ্ঞাত জাতির শ্রায় স্বেচ্ছাই ছিলেন, অধিকন্তু দম্ভ্য-বিশেষ ছিলেন।



## FOURTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. It has been said of Bankimchandra that 'his novels are English in taste, in the construction of the plot, in the setting of character, sometimes to a fault. He was no imitator, but the moulds of his thought had come to be, by much reading and assimilation, English, and they imparted their stamp to all his productions'. Discuss the truth of the statement in the form of an essay. 50

*Or,*

Trace the influence of the West in the earlier compositions of Rabindranath Tagore.

*Or,*

Write an essay on 'Western Influence in Bengali Drama, 1870-1900.'

## SECOND HALF

*Attempt only ONE question in the form of an essay, which must be written in Bengali*

1. 'The creation of modern Bengali prose must be attributed to William Carey and the early European writers who followed in his footsteps.' Criticize or justify this statement, incidentally discussing also the value and extent of the contribution of contemporaneous non-European writers towards the same cause. 50

2. Give a full account of the history of the conflict of prose styles in the first half of the nineteenth century. 50

3. Sketch the history of early Bengali narrative and descriptive writing (before 1857), and discuss its influence on the prose style of the period. 50

## HINDI

## FIRST PAPER

## FIRST HALF

*The questions are of equal value, and five marks are allotted for general efficiency, good expression, and legible handwriting*

*Answer Question No. 2 and ANY TWO of the following*

1. Critically examine the various important tendencies of the modern Hindi Poetry. 15

2. Write biographical and critical notes on *any three* of the following :— 15

(i) Rahim, (ii) Tulsi Sahib, (iii) Sahjo, (iv) Dadu Dayal, (v) Raidas, (vi) Malookdas, (vii) Gokul Nath, (viii) Nabhadas.

3. Critically examine the position of Bihari Lal in regard to the general literary tendencies of his age. 15

4. Briefly sketch the growth of modern Hindi Prose. 15

5. Give a critical estimate of the Hindi contributions of some of the most prominent Mohamedan writers of the 16th and the 17th centuries. 15
6. Discuss the position of Babu Harichandra as a dramatist—poet and prose stylist. 15

## SECOND HALF

*The questions are of equal value*

*Answer ANY TWO of the following questions*

1. Trace the origin and development of the *Bhakti* movement in India from the earliest times, and explain the causes which led to the origin and growth of a *Bhakti* literature in Hindi, giving the names of the principal *Bhakti* writers and their works.
2. Give a full account of the life and character of Mira Bai, and state what gained for her the high place she occupies among the saints of Northern India. Quote one of her characteristic *bhajans*.
3. Enumerate and describe with quotations the different *Rasas* depicted by Tulsidās in his works, specially the *Rāmcharit-mānas*.
4. Describe fully the religious doctrines of Kabir as evidenced by his writings, and the influence they had on the religious belief of the people of Northern India during his own and subsequent times.
5. What was the mission of Uddhav to Vrindāvan? What were the doctrines he sought to teach the Gopis? Show how far he was successful.

## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

*The FIRST question and ANY TWO of the remaining four are to be attempted*

नीचे लिखे पद्यों का अर्थ सरल हिन्दी में पूरे तौर से लिखिये और प्रसंग भी बताइये :—

- (a) छोभी भूरत चोर ठग, गठछोरा ये पांच ।  
जो यहि हाट सजग भा, ताकर गथ पै बांच ॥
- (b) छोनि बिलोनि तहां को कहा ।  
छोनी सोइ कंत जेहि चहा ॥
- (c) बरुनि बान अस ओपहिं बेधे रन बन डंख ।  
साउज तन सब रोवां पंखिन तन सब पंख ॥

(d) भूत कहौ, अवभूत कहौ,  
 रजपूत कहौ, जोलहा कहौ कोऊ ।  
 काहुकी बेटी सों बेटा न ब्याहब,  
 काहुकी जाति बिगारौ न सोऊ ।  
 तुलसी सरनाम गुलाम है रामको,  
 जाको रूचै सो कहौ कहु कोऊ ।  
 मांगि कै खैबो, मसोतको सोइबो,  
 लैबे को एक न देवे को दोऊ ॥

2. पद्मावत के सात समुद्रों का वर्गन सरल हिन्दी में विस्तारपूर्वक कीजिये ।
3. सूरदास, तुलसीदास और कबीर के विषय में आप जो कुछ जानते हों सरल हिन्दी में लिखें ।
4. नीचे लिखे शब्दों का शुद्धरूप लिखिये :—  
 राकस, बीजु, खिनहि खिन, आछरपन, रवन, कुरूम, सँवरवँ ।
5. प्रश्न (१) के पद्यों का छन्द बताइये ।

## SECOND HALF

Answer ANY THREE questions

1. आवश्यक टिप्पणियों सहित नीचे लिखे पद्यों का अर्थ हिन्दी में लिखिये :—

- (a) प्रभुता को सब कोऊ भजै, प्रभु को भजै न कोय ।  
 कह कबीर प्रभु को भजै, प्रभुता चेरी होय ॥
  - (b) माया छाया एक म्यो, बिरला जाने कोय ।  
 भगतां के पीछे फिरै, सनमुख भागै सोय ॥
  - (c) सिहों के लेहँदे नहीं, हंसों की नहि पांत ।  
 लालों की नहि बोरियां, साध न चलै जमात ॥
  - (d) इस जीनेका गर्व क्या, कहा देह को प्रीति ।  
 बात कहत बह जात है, बारू की सी भीति ॥
2. नीचे लिखे पद्यों का भावार्थ हिन्दी में लिखिये :—
- (a) मिथ्या माहुर सज्जनहिं, खलहिं गरल सम सांच ।  
 तुलसी छुवत पराय ज्यों, पारद पावक आंच ॥

- (b) दीयाकी बतियां कहीं, दीया किया न जाय ।  
दिया करै सनेह करि, हीये जोति दिखाय ॥
- (c) पर योषित परसै नहीं, ते जीते जग बीच ।  
परतिय तल्लत रैन दिन, ते हारे जग नीच ॥
3. हिन्दी के आदि कवि के विषय में आप जो कुछ जानते हों सप्रमाण लिखिये ।
4. श्लेष, यमक, रूपक और उत्प्रेक्षा के लक्षण उदाहरण सहित लिखिये ।

## THIRD PAPER

## FIRST HALF

*The questions are of equal value*

*ANY THREE questions are to be attempted*

1. निम्नलिखित पद्य की भाषा क्या है, और आधुनिक खड़ीबोली से इसमें क्या अन्तर है ? यह भी बताओ कि पद्य किस अलंकार का उदाहरण है तथा उस अलंकार की परिभाषा क्या है ।

बचैगा न समुहाने बहलोल खां अयाने,  
भूषण बखाने दिल आनि मेरा बरजा ।  
तुझते' सवाई तेरा भाई सख्हेरि पास,  
कैद किया साथका न कोई बीर गरजा ॥  
साहनके साह उसी औरैगके लीन्हे गढ़,  
जिसका तू चाकर और जिसकी है परजा ।  
साहिबका ललन दिलीदलका दलन अफ-  
जलका मलन सिवराज आया सरजा ॥

2. (a) कविवर बिहारीलाल की सतसई की रचना में निम्नलिखित कारण क्या था ? मिर्जा राजा और उनके सम्बन्ध पर भी प्रकाश डालो ।

(b) निम्नलिखित दोहे की विशेषताओं पर प्रकाश डालो :—

मेरी भवबाधा हरौ, राधा नागरि सोय ।  
जा तन की भाई परे, इयाम हरित घुति होय ॥

3. निम्नलिखित पद्यों की व्याख्या करो :—

(a) नहिं परागु नहिं मधुर मधु, नहिं विकास इहिं काळ ।

अछी कलीहीसौं बंध्यौ, आगैं कौन हवाळ ॥

सबै हँसत करतार दै, नागर ताकै नावं ।

गयौ गरबु गुनकौ, गयें गंवारे गावं ॥

(b) आवत गुसलखाने ऐसे कछू त्योर ठाने,

जानो अवरंगही के प्रानन को लेवा है ।

रस खोट भए ते अगोट आगरे मैं सातौ,

चौकी डांकि आय घर कीन्ही हइ रेवा है ॥

भूषन भनत मही चहूँ चक्क चाहि कियो,

पातसाह चकताकी छाती माहिं छेवा है ।

आन्यो न परत ऐसे कामहि करत, कोऊ

गंधरब, देवा है, कि सिद्ध है, कि सेवा है ॥

(c) जिय सूधी चितौन की साथै रही.

सदा बातन मैं अनखाय रहे ।

हंसिकै हरिचन्द न बोले कभूँ.

जिय दूरहिं सों ललचाय रहे ॥

नहिं नेकु दया उर आवत है,

करि के कहा ऐसे सुभाय रहे ।

सुख कौन सो प्यारे दियो पहिले,

जिहि के बदले यों सताय रहे ॥

4. हिन्दी में नाटक-साहित्य की उत्पत्ति और विकास पर एक निबन्ध लिखो और बताओ कि वर्तमान उत्तम नाटकों के खेले जाने में क्या बाधा है ।

5. नाटक और नाटिका में क्या अन्तर है ? वस्तु, महानाटक, उपरूपक, चर्चरिका, तथा प्रयोगातिशय से क्या अभिप्राय समझते हो ?

## SECOND HALF

*All questions carry equal marks. Attempt ANY THREE*

1. Discuss elaborately the tendencies in modern Hindi poetry with reference to Harioudh and Shreedhar Pathak, and give your reasons for placing them in one or the other school of Hindi poetry.

2. Compare the Ashtachhap school of Hindi poetry with any other similar movement in Hindi literature, and try to show the characteristics of this school with illustrations.

3. Discuss the poetic excellences of either Harioudh or Shreedhar Pathak and assign their comparative places in Hindi world, stating your reasons thereof.

4. In what respect do the upama and utpreksha alankars differ ? Please illustrate your answer with copious examples

5. What are the main classifications of alankars in Hindi poetry ? Explain the distinction with illustrations, and point out the main alankars in the following lines :—

(a) चहुँ दिसि हिम गिरि-सिखर,

हीर-मनि मौलि-अवलि मनु ।

स्रवत सरित-सित-धार,

द्रवत सोइ चन्द्रहार जनु ॥

(b) भरोसो इह इन चरनन केरो

श्रीवल्लभ नख चन्द्र छटा बिनु सब जग मांझि अंधेरो ।

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#### FOURTH PAPER

*The figures in the margin indicate full marks*

##### FIRST HALF

1. Answer any one of the three questions given below, in the form of an essay :—

- (a) Enumerate the prominent features of Hindi literature during the second half of the 19th century, and discuss fully the causes which have developed them. 50
- (b) Write a critical note on the works of Shridhar Pathak, and determine his place among the modern writers, as well as among the Hindi poets of any age, giving fully your reasons for doing so.
- (c) Give an account of the chief public movements which have helped Hindi literature during 1850-1900 A.D.

##### SECOND HALF

2. Write an essay, in Hindi, on one of the following subjects :—

- (1) Write a brief note on Sufism. To what extent does Hindi literature bear the influences of Sufism ? 50
- (2) Distinguish between Hindi and Urdu. How far has Persian influenced the present-day Hindi ? Give five examples of peculiarities of grammar and idiom, alien to the spirit of Hindi.
- (3) Who was Insha Allah Khan ? Compare his style of Hindi prose to that of Sadal Misra.

## ORIYA

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Give an idea of three of the following works :—  
*Bichitra Rāmāyaṇa, Tulā-bhinā, Jagamohana Rāmāyaṇa, Dārdhyatā-bhakti, and Rasakallola.*
2. 'In the matter of rhetorical composition, he excels Upendra in some points, and unlike Upendra, he has composed his poems in genuine Oriya language.' Criticize this opinion about Abhimanyu Samanta Sinhar.
3. Write a note on Chautisha literature in Orissa.
4. Write an estimate of Sāralā Dāsa as a translator of the Mahābhārat.
5. Discuss, with references to the text, as far as possible, the place of *Mathurā-mangala* or *Prema-panchāmṛta* in Oriya literature.

## SECOND HALF

*Attempt ANY THREE questions*

1. Do you find any change of spirit in post Upendra Bhanja literature? If so, discuss with reference to some of the prominent works of the age.
  2. Write a short history of fictional poems in Oriya literature; name and discuss any prominent work of this character.
  3. Write short notes on any three of the following :—  
 Dhananjay Bhanja, Bhimādhira, Brajanāthbarojenā, and Baladeva Kavi Suriya.
  4. Write a short account of the literary unit of *Bidagdha Chintāmani*.
  5. Write an account of the services done by Rādhānāth Rāy or Madhusudan Rao to Oriya literature.
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## SECOND PAPER

*The figures in the margin indicate full marks*

1. ନିମ୍ନଲିଖିତ ପ୍ରଶ୍ନମାନଙ୍କ ମଧ୍ୟରୁ ଦୁଇଗୋଟିର ଉତ୍ତର ପ୍ରଦାନ କର:— 20

- (କ) ରାମାୟଣକାର ବଳରାମ ଦାସଙ୍କ କବିତ୍ବର ପରିଚୟ ଦିଅ ।  
 (ଖ) ବଳରାମ ଦାସଙ୍କ ରାମାୟଣ ବାଲିଙ୍କ ରାମାୟଣର କେତେ ଦୂର ଅନୁବର୍ତ୍ତୀ ତାହା ସପ୍ରମାଣ ନିର୍ଦ୍ଦେଶ କର ।  
 (ଗ) ଉତ୍କଳ-ସାହିତ୍ୟ-କ୍ଷେତ୍ରରେ ଜଗନ୍ନାଥ ଦାସଙ୍କର ସ୍ଥାନ ନିରୂପଣ କର ।  
 (ଘ) ଜଗନ୍ନାଥ ଦାସଙ୍କ ଭାଗବତ ମୂଳ-ଭାଗବତର ଅବକଳ ଅନୁବାଦ ଅଟେ କି? ଯଦି ହୋଇ ନ ଥାଏ ତାହା ସପ୍ରମାଣ ନିର୍ଦ୍ଦେଶ କର ।

2. (କ) କୋଇଲି ! ଲକ୍ଷ୍ମୀର ବନ୍ଧୁର ନାରାୟଣ । 9  
 ଲଳିତେଶ ନାମ ଦେଲେ ଗାର୍ଗବ ବ୍ରାହ୍ମଣ ଲେ ।

- (ଖ) କୋଇଲି ! ହାଇ ଯେ ମାରଇ ପୁଅ ତୁଣ୍ଡ ।  
 ହୃଦରେ ଦେଖିଲେ ମାଏ ସପତ ବ୍ରହ୍ମାଣ୍ଡ ଲେ ।

ଜଗନ୍ନାଥ ଦାସଙ୍କ ଅର୍ଥ କୋଇଲିରେ ପ୍ରଦତ୍ତ ଅର୍ଥ ଅନୁସାରେ ଏହି ଦୁଇ ପଦ ମଧ୍ୟରୁ ଗୋଟିକର ଅର୍ଥ ଲେଖ । ଏହି ଦୁଇ ପଦର ପାଠ ସହିତ କେଶବ କୋଇଲିରେ ପ୍ରଦତ୍ତ ପାଠରେ ପାର୍ଥକ୍ୟ ଅଛି କି ?

3. (କ) ବେଦ ବଉଳ ମୋହର ଦୁଇମତ । 10  
 ମୁହିଁ ସିନା ଉଆଇଲ ଦେବତା ବଇତ ॥  
 (ଖ) ସେହି ଦନ୍ତ ଶନର ଶ୍ରେଣୀରେ ରେଦ ନାହିଁ ।  
 ଯାବତ କାଳକୁ କଥା ଶାଷ୍ଟେ ଅଛି ରହି ॥



(ଗ) ମହାପାପ ଅର୍ଜିଲୁ ତାମସ ଭବ ବହୁ ।

ତେଣୁ କର ଦୁର୍ଜଳ ତୋ ଦେହେ ତେଜ ନାହିଁ ॥

ପ୍ରକରଣ ନିର୍ଦ୍ଦେଶ କର ଦୁଇଟିର ଅର୍ଥ ଲେଖ ।

Or.

(କ) ଏକଇ ବୃକ୍ଷେ ହଂସ ଦୁଇ ।

ବସନ୍ତ ପ୍ରିୟଭବ ବହୁ ।

ସ୍ଵଭବେ ବେନି ଶାଖେ ଥାନ୍ତି ।

ଏକ ଆରେକ ନ ଦେଖନ୍ତି ।

ସମାନ ଶକ୍ତି ସେ ବହନ୍ତି ।

ବନ୍ଧ ବମ୍ବୁକୁ ବେନି ଗତି ।

ସେ ବୃକ୍ଷେ ଯେତେ ଫଳ ଫଳେ ।

ଏକ ଭୁଞ୍ଜି ତାହା ବଳେ ।

ଏକ ବଞ୍ଚି ଉପବାସେ ।

ନିର୍ଲେପ ନିରଞ୍ଜନ ଆଶେ ॥

(ଖ) ସ୍ଵଭବେ ରଜୋଗୁଣ ଛାଡ଼ି ।

ସତ୍ତ୍ଵ ସଂଯୋଗେ ଚିତ୍ତ ଜଡ଼ି ।

ସତ୍ତ୍ଵକୁ ଜଣି ସତ୍ତ୍ଵ ଗୁଣେ ।

ନିର୍ମାଣି ପରମ କାରଣେ ।

ନିଶ୍ଚଳେ ଥାଇ ଶୁଦ୍ଧ ମନେ ।

ବାହ୍ୟ ଅନ୍ତରେ ସୁମରଣେ ।

ଯେସନେ ଶରକୃତ ପଥେ ।

ଶର ବନ୍ଧୁ ହେଠ ମାଥେ ।

ତାର ନିକଟେ ରାଜା ଗଲ୍ଲ ।

ସେ ତାହା ଜାଣି ନ ପାରିଲ୍ଲ ॥

ଏହି ଦୁଇଟି ମଧ୍ୟରୁ ଗୋଟିକର ଅର୍ଥ ବର୍ଣ୍ଣନା-ଭାବରେ ଲେଖ ।

“ଖ” ର ପାଠରେ କିଛି ଅଶୁଦ୍ଧ ଥିଲେ ତାହା ଶୁଦ୍ଧ କରି ଦର୍ଶାଅ ।

4. (କ) କର ରକ୍ଷିଲ ଦୟାଳ ପରାୟେ ବସୁ ଅମ୍ଭର ଅକାର ରଖିବ ।

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ଜମଠ ନିଜକୋଷ କଲ ପ୍ରାୟେ ତା ଗ୍ରାସ

କେବଳ ଭୁମ୍ଭେ ନ ଦେଖିବ ହେ ।

କୃପାନିଧି । କର୍ମରେ ଅଛୁ ଏତେ ଯୋଗ ।

କରୁକି କେତେ ଦଶା ଭୋଗ ।

କୁରୁଣ ପକ୍ଷୀପ୍ରାୟେ ହୁଏବାକୁ ଏକାଏ

କରାଇବ ଭୁମ୍ଭେ ବିସ୍ଫୋଗ ହେ ॥

(ଖ) କମଳେ କମଳଦମନୀ ପଶନ୍ତେ,

କମଳେ ହୋଇଲେ ତଞ୍ଜଳ ।

କୁବଳୟ ଆଦି କହ୍ନାର ସହିତେ

କେ ତହିଁ ନୋହିଲେ ନିଶ୍ଚଳ ।

କେବଳ । ଯେ ଯାହାକୁ ଗୁଣେ ବଳଇ ।

କି କି କର ପାଶେ ଦେଖିଲେ ତାକୁ ସେ

ଅଧ୍ୟେୟି ହୋଇ ତରଳଇ ।

(ଗ) କୃଷ୍ଣହୃଦୟଳ ପରାୟେ କମଳମାଳରେ ମଣ୍ଡିତ ହୋଇ ।

କରଜରଞ୍ଜନୀ ସମାନକୁ ପାଇ ପୁନର୍ଭବକୁ ଛେଦଇ ।

କରଣୀ ପରାୟେ ପଦ୍ମ ଧରବାଏ କାଳୀପ୍ରାୟେ ତନ୍ତ୍ର ଧର ।

କି ଅବା ନାଗରାୟ ଫୁଲବେଶ ଧରି ଘନରସକୁ ବିସ୍ଫୁରି ।

କି ଅବା ପକ୍ଷିଣୀ ବେନି ତଟ ପାଣି ଦୁଇ ଦିନ ଏକ ରାତି ।

କି ସୁରସରଣି ଭଞ୍ଜୁ ପରଣି ହୋଇବାରୁ ଗତାଗତ ।

ପ୍ରକରଣ ନିର୍ଦ୍ଦେଶ ପୁରସ୍କାର ଦୁଇଗୋଟିର ଅର୍ଥ ବିଶଦଭାବରେ  
ଲେଖ ।

5. ପ୍ରୋଷିତ ପ୍ରିୟତମା, ବାସକସକ୍ତା, କଳକଞ୍ଚିତ, ପାଶବତୀ ଦ୍ଵାରେ,  
କମଳମଣ୍ଡଳପ୍ରାୟ, ଶୀତଳମଣୋହି, ନକ୍ଷତ୍ରମାଳ, ଏମାନଙ୍କ ମଧ୍ୟରୁ ପାଞ୍ଚଟିର  
ଅର୍ଥ ଲେଖ ।

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୦. ନିମ୍ନଲିଖିତ ଗଦ୍ୟାଂଶ ମଧ୍ୟରୁ ଗୋଟିଏକୁ ଆଧୁନିକ ସାହିତ୍ୟିକ ଦୃଷ୍ଟିରେ ଲେଖ । ୨୦

(କ) ସେ ହେଲେକି ମୋହନା କନ୍ୟା ସମାପ୍ତମୟେ ସିଦ୍ଧ-ମଣ୍ଡଳୀ ମଧ୍ୟରେ ମିଳିଲା । ତ ସେ କେମନ୍ତ ପ୍ରକାରେ ମିଳିଲା । ସ୍ୱର ମନ ବହନମରେ କି ମନ୍ତ୍ରମଥ ପାତାଙ୍ଗ ଉଡ଼ାଇଲା । କି ଧଉସିଏ ନାମ ପଦକୁ ଲବଣ୍ୟ ବାରି ବୁଡ଼ାଇଲା । କି କରବଲ୍ୟ ପରମାନନ୍ଦକୁ ଅସିମାଦ ଅବଦ୍ୟା ଢାକିଲା । ବୋଧ ଉଦୟ ହୋଇଲା । ତନ୍ମୟ କି ମାୟାମେଘ ଘୋଡ଼ିଲା । କି ଶାନ୍ତରସ କମଳକୁ ବୁଲୁତା ସର୍ପିଣୀ ଖାଇଲା । ତ ସେ ଅବଦ୍ୟା ମୁଦୁସଞ୍ଜୀବନୀ କନ୍ୟାର ବୁଝୁର ବଳୟ କଳଶର କିଣି । କଟି ମେଖଳାର ରଢ଼ି ହିଁଙ୍କୁ କୋକିଳକର ଭୁଞ୍ଜି ପାଢ଼ି । ସମ୍ପୂର୍ଣ୍ଣ ଯୁକ୍ତ ଅଛି ବସନ୍ତ ଚନ୍ଦ୍ର ବେଦି । ମନ୍ଦିରକୁ ସପକ୍ଷକ ହୋଇବା ନିମନ୍ତେ ତନ୍ତ୍ର ଧରାଅଛି କରେ କରଣ ଜଢ଼ି । ଏମନ୍ତ ସମୟେ ପଡ଼ିଲା ସିଦ୍ଧ ବୁଦ୍ଧଗଣମାନଙ୍କୁ ଘୋର ଅନଙ୍ଗ ଧାଡ଼ି । ତ ସେ ସିଦ୍ଧକର ସମାପ୍ତ ଭାଙ୍ଗିଲା ।

(ଖ) ଏବମୃତ ଶୁଣିଲା ଯହିଁ ଇଶ୍ୱରର ତହିଁ ଅମୋହ ଅମୃତ ବଚନ । ଧାଡ଼ିକାରେ ବସିଲା ତାର ନିଜ ତରତନ । ସେ ଜନ୍ମ କଥା ସୁମରଲା । ଘୋର ନର୍କ ବିମ୍ବରଲା । ମନବୁଦ୍ଧି ତମକଲା । ଶରୀର ବାଡେ କଦଳୀ ପ୍ରାଏ କଖିଲା । କାମାଦିକାର ଛାଡ଼ିଲା । ଜନ୍ମମରଣ ଭୟ ଚିତୋଇ ବୋଇଲା । ନିତେ ନିତେ ମୋତେ ଅବଦ୍ୟା ବ୍ୟାଘ୍ରଣୀ ଘୋଡ଼ିଲା । ମଉଁ ହେଲା । ଜନ୍ମ ବୋଇବା ମାତ୍ରକେ କି କାଳ ଘୋଡ଼ିଲା । ଭୁଣ୍ଡ ଶୁଣି ମୁଖ ବିବର୍ଣ୍ଣ ଦିଶିଲା । ସାହସ ଉଡ଼ିଲା । ଚନ୍ଦ୍ରା-କ୍ଷର ଘୋଡ଼ିଲା । ଲେଉଟକ ପଡ଼ିଲା । ଜନ୍ମମରଣ ଜରାଭାତେ । ବ୍ୟାକୁଳ ଚିତ୍ତେ । ତରୁଣେ ଶେଖର ଛାମୁରେ ଭରା ହୋଇ । ମହାଭୟେ ପାଇଁ । କରପଦ ଯୋଡ଼ି । ସ୍ୱର କର କହିଲା ବେଗତା ଚିତ୍ତ ଛାଡ଼ି । ଭେ ସ୍ୱାମୀ ତୋର ପଦାରବିନ୍ଦକୁ ଆଶ୍ରେ କର ମୁଁ ତୁମ ହୋଇଲି ଯଦ୍ୟପି । ମୋତେ ମହାଘୋର ନର୍କକୁ ଦେଉ ଅଳ୍ପ ସମୟ । ଭେ ଦେବ କେବଣ ସେ ଦାରୁଣ ବଚନ ଦେଲୁ ଅଗାଧ । ତାହା ଚନ୍ଦ୍ରଭାଗବତ୍ କେ କେ କର ପାରିବ ଅବଗାଧ ।

7. ନିମ୍ନଲିଖିତ ଦୁଇଟି ପଦ୍ୟାଂଶରୁ ଗୋଟିକର ଅର୍ଥ ସରଳ ଭାବରେ ଲେଖ । 15

(କ) ଝେତ ଛବି ରତ୍ନମୟ ଗଜ ବାଜି ଅଛୁ ।

ତେଣୁ ସେ ସନ୍ନିବି ଶୋଭା ସିନ୍ଧୁ ପ୍ରାୟେ ଗଛ ।

ଗରୁଡ଼ ମୁକୁନ୍ତ ତଥୁ ମନର ପରାୟେ ।

ଲବଣ୍ୟ ଲକ୍ଷ୍ମୀ ଲଭିଲେ ସିନ୍ଧୁ ମନ୍ତ୍ରୀ ବାୟେ ।

ପୁରୁଷେ ଅମରେ ଲଭିଥିଲେ ଯେତେ ଯେତେ :

ଏକ ରୂପ ଧରି ବାହାର ହୋଇଲେ ତେତେ ।

ତନ୍ତୁ ଲକ୍ଷ୍ମୀ, ଦନ୍ତ ମଣି, ଲପନ ଚନ୍ଦ୍ରମା ।

ଅଧର ପୀୟୁଷ, ଗଜ ଗଜଭୁଜବାମା ।

ବନ୍ଧୁଭବ ହୃଦୟର, ଶୋଭା ବରହାସ ।

ଭୂଷଣ ପାରିଜାତକ, ଦୃଶ୍ୟଲ ବସ ।

ସବୁ ଦେବତାଏ କି ସେ ଏକ ରୂପ ଧରି ।

ଅନରୁଦ୍ଧ ରୂପ ଲଭି ବାଦ ପରିହରି ।

(ଖ) ପ୍ରବେଶ ହୋଇଲୁ ଆସି ପ୍ରଦୋଷ କାଳ ।

ଶଶିକଳା ଦଶିଲୁ ଗଗନ ମଣ୍ଡଳ ।

ଦଶସୀମନ୍ତ୍ରୀନୀ ହାସ୍ୟ ଦଶନ ଦିଶେ ।

କାମ ତରୁବର ନବ ଅଙ୍କୁର କି ସେ ।

ଚକୋର ଚଞ୍ଚୁ କପାଟ ଫେଡ଼ାଣ କୁହୁ ।

ଚନ୍ଦ୍ରବାକୀ ନିକୃନ୍ତନ କୁନ୍ତ ଉର୍ଦ୍ଧ୍ବ ।

ମାନବତୀ ମାନ ଗଜଭୁଜ ଅଙ୍କୁଶ ।

ତାରାଗଣ ପଦ୍ମବନ ବିନୋଦ ହଂସ ।

ସଂଯୋଗିନୀ ରସରେଖା ରସିକ ପ୍ରାଣ ।

ବିଯୋଗିନୀ ହୃଦୟକୁ କରୁଣା ବାଣ ।

କଇଁରବ କଣ୍ଠଭୂଷା ମୁକୁତା ହାର ।

କମଳିନୀ ଅନନ ବିଖଣ୍ଡ କୁଠାର ।

ଦିନମଣି କରତାପ ଶମକୁ ଗଲ ।

ତରୁଲତା ପଞ୍ଚବ ସରସ ପାଇଲୁ ।

## THIRD PAPER

Full Marks—100

*The questions are of equal value**Attempt ANY THREE questions from each of the two halves*

## FIRST HALF

1. What is your idea about the dress of the Oriya ladies of ancient times? Give your answer with reference to the dress of Labanyabati as described by Upendra Bhanja.

2. Comment on the poetic merits of the author of Bidagdha Chintamani from what you have read from the Typical selections from Oriya literature, and quote lines from the same in support of your statement.

3. Explain fully the following lines clearing up the allusions :—

କଷ୍ଟପଣ ତାର ତାର ଅହଲ୍ୟା ।  
 ବାଳୀ ଦ୍ରୌପଦୀ ମନୋଦୟ ଲଳା ସେ ।  
 କଲ୍ଲବକା ବୋଲନ୍ତି ସେ ।  
 ବରୁଣ ଏହା ଗତି ଅନୁନୟନ  
 କରୁ ସୁବେଦ ସେ କିନ୍ତୁ ଯେ ।

Or,

ପ୍ରୀତି-ବିରୋଧୀ ଯେତେ ସହଚର ।  
 ଦୟାବେ ହୋଇବେ ପ୍ରବୋଧ କରନ୍ତୁ ତାହାଙ୍କର କର ଧରିରେ ।  
 ସୁନୟା ।  
 ପର-ଉପକାର ଯଶ ଥୋଇଲେ ।  
 ଦେଖ ମହାଦେବେ ବିଷ ଖାଇଲେ  
 ଦେଖ ଭୀଷମଦ ହୁଏ ଧରି ହର ଭବଗ୍ରାସ୍ତ୍ର ବୋଲୁଲେ ରେ ।  
 ସୁନୟା ।

4. Reproduce from your memory a song with ୫ or ୦ initial of the Kishoree Chandrananā Champu by Baladev Kavisurya, and explain it fully.

5. Of Upendra Bhanja and Kavisurya Baladev, whom do you consider to be the greater as a poet, and why? Quote lines from the authors (from your prescribed list of books) to justify your opinion.

## SECOND HALF

1. Comment on the poetic merits of Rādhānāth and state some of them which you have found in his Mahayātrā.

2. Was Fakirmohon a successful writer of Oriya novels? Give your opinion with reference to his novel 'Lachhmā.'

3. Who is the ideal woman in Fakirmohon's novel 'Lachhmā' ? Briefly describe her, following the line of the novelist.

4. Write a critical note on the poem 'ଶକ୍ତ୍ୟକ୍ତ' by Madhusudan Ra'o.

5. Give the substance of the fiery speech of Amarsi from Radhanath's Mahayātrā, not exceeding 20 lines, and state where and on what occasion it was delivered.

#### FOURTH PAPER

*The questions are of equal value*

##### FIRST HALF

*Answers to this half must be in Oriya*

1. Trace the gradual decline of the style of Upendra Bhanja in Rasakallola and Bidagdha-chintamani. 50

*Or,*

Radhanath is the last of the poets who followed the diction as well as the mode of treatment peculiar to Upendra Bhanja. Examine this statement critically. 50

*Or,*

Kavisurya, though adopting a different line in poetry from that of Upendra Bhanja, is not exempt from the influence of the latter. To what extent can this statement be justified? 50

##### SECOND HALF

Write an essay, on one of the following subjects :— 50

- (1) Dramatic literature of Orissa : its connection with Sanskrit literature, indigenous *pālās*, and the English dramatic works.
- (2) The treatment of Nature in modern Oriya literature under Western influence.
- (3) Western influence in Radhanath's Mahayātrā or the different verse tales composed by him.

#### URDU

##### FIRST PAPER

*The questions are of equal value*

*Answer ANY SIX questions*

1. Notice briefly the origin and development of Urdu poetry up to the age of Shāh Ḥātim of Delhi, noticing the more prominent poets of that period.
2. Trace the influence of Persian on the Brij Bhāṣhā.

8. How far, and in what manner, has the literary style of Urdu been influenced by Arabic?

4. How far do you support the theory of Professor Shairānī that the Panjābī and not the Brij Bhāshā forms the basis of the Urdu language?

5. Compare the styles of the poetry of Mir Taqī Mir and Sāwda. Which of the two do you like better, and why?

6. Give a sketch of the life and works of Walī.

7. Notice the earliest prose writings in the Dakhnī dialect of Urdu.

How did it happen that literary works in Urdu prose were written in Delhi long after Urdu prose had gained ground in the Dakhan?

8. Describe the part played by the Fort William College of Calcutta in the development of Urdu prose, noticing at least six writers of outstanding merit who wrote under the patronage of the College.

9. Give the distinguishing features of the poetic styles of the schools of Atāsh and Nāsikh. Do you approve of the campaign of 'the Purification of Urdu' started by Nāsikh? State your reasons.

10. Write short notes on : Kabīr Dās, Ja'far Zatlālī, Khwāja Gēsūdarāz (Banda-nawāz), Mulla Wajhī, Muṣṣḥafī, Inshā, Shāh 'Abdul-Qādir of Dībh, Dīwānzādah, Masnawī-i Sīhrul-Bayān, Naw Tarz-i Murāṣṣā.

11. Write a note on Mir Anīs and his style of poetry, comparing him with other writers of *Marsiya* who were his contemporaries.

## SECOND PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

*Attempt THREE questions, of which Question No. 4 must be one.*

1. Prior to Walī there have been poets who claim to have compiled 15  
دیوان. Why is Walī regarded as the بارِ آدم of Urdu poetry?  
How will you divide his دیوان in point of diction? Estimate his  
poetry by illustrations.

2. (a) Compare the style of سودا with that of میر تقی میر,  
pointing the chief characteristics of both. 8+7=15

(b) Estimate the value of the under-mentioned verses :—

(میر) لگا نہ دل کو کہیں کیا سنا نہیں تونے

جو کچھ کہ میر کا اس عاشقی نے حال کیا

(سودا) سودا سے کہا میں نے کیوں تجھ سے نہ کہتے تھے

لب عشق کے سانس سے ظالم نہ کر آلودہ

(سودا) چمن میں صبح جو ارس جنگجو کا نام لیا

صبا نے تیغ کا موج روان سے کام لیا

ہمارے اکے ترا جب کسی نے نام لیا (میر)  
 دل ستم زدہ کر ہم نے تھام تھام لیا  
 سودا جہان میں آئے کوئی کچھ نہ لے گیا (سودا)  
 جاتا ہوں ایک میں دل پر آرزو لئے  
 ایک معرورم چلے میر ہمیں دنیا سے (میر)  
 ورنہ عالم کو زمانہ نے دیا کیا کیا کچھ

8. Give a sketch of the life of Mir (میر تقی میر). Estimate his influence on Urdu poetry and fix his position as an Urdu poet. 15

4. (a) Explain the following extract with reference to the context :— 20

ہوا خبط سے مجھکو ربط تمام  
 لگی رہنے رحشت مجھے صدم و شام  
 کبھو کف بلب مست رہنے لگا  
 کبھو سنگ در دست رہنے لگا  
 کبھو غرق بھر تعیّر رہوں  
 کبھو سر بجیب تفکر رہوں

(b) What is the position of میر تقی as a Masnawi-writer ?

(c) Compare the following and criticize :—

(شوق)

نہ روئے سے دم بہرِ تامل کیا \* نہ خاصہ بھی دن بہرِ تامل کیا  
 یہ نقشہ چمن کا مبدل ہوا \* کہ گلزار جو تھا رہ جنگل ہوا  
 (میر حسن)

خفا زندگانی سے ہونے لگی \* بہانے سے جا جا کے سونے لگی  
 تھہرنے لگا جان میں اضطراب \* لگی دیکھنے رحشت آلودہ خواب

5. Translate the following, clearing poetic allusions :—

15

رکھتا ہوں شمع آہ سجن کے فراق میں  
 حاجت نہیں چراغ کی میرے رواق میں  
 آب حیات وصل سون سینے کو سرد کر  
 جلتا ہوں رات دن میں پیا تجھ فراق میں



خدا یا ملا، صاحب درد کون  
 کہ میرا کہے درد بے درد کون  
 گمراہ ہیں تجھ زلف میں کئی اہل ہدایت  
 یہ بات ہے ظلمات کی نہیں جسکی نہایت  
 ارباب فہم آگے رہ صاحب ہنر ہے  
 کینہ کسوں کے دل سے جس کو نکال آیا  
 ہوں میں وہ زحشی دم خوردہ کہ تادشتِ عدم  
 پات کھڑے ہے تو مانسب صدا جاتا ہوں  
 گذرا ہے تو چمن سے کہ بلبَل کی اب نگاہ  
 آتی ہے روے گل کی طرف کس دماغ سے  
 ہے زلف میں دل میرا مت کیجیو تو شانہ  
 زنجیر نہ کھل جا رہے سخت یہ دیوانہ  
 حال کہ چپ رہا جو میں بولا  
 کس کا قصہ تھا ہاں کہے جا میر  
 تصویر کے سے طائر خاموش رہتے ہیں ہم  
 جی کچھ اُچٹ گیا ہے اب نالہ و فغان سے

### SECOND HALF.

1. Translate into English :—

10

ایک دن کا ذکر ہے کہ راقم سارن میں ایک باغ کے در و دیوار کے بیچ سر راہ ایک بلندی پر بیٹھا تھا اور میر چراغ علی مرحوم حیف تخلص بھی میرے ساتھ تھے اس وقت دوپہر سے کچھ کم ہوا کہ ایک جھنڈ کا جھنڈ پریوں کا اس باغ کے دیہرے میں پرستش کر قضا را ادھر آ نکلا - ان میں ایک کہترانی چلپٹی رنگ نہایت چالاکي و بیداکی سے پیش قدمی کرتی تھی اور ایک انداز و ناز سے پاؤں دھرتی تھی سرایا اسکا گویا سانچے میں ڈھلا تھا - غرض تماشیوں کا جی دیکھتے رہے

سنسنا گیا اور آنکھوں تلے اندھیرا آگیا - میر مرحوم کے بھی دل پر دیر تک اسکا صدمہ رہا - لیکن وہ ہم کو اپنا جھمکڑ دکھاتی ہوئی نہ جانے کدھر گئی - پھر قاشام راہ دیکھی ندان سمجھے کہ تجلی کو تکرار نہیں اب بیٹھنا بیکار ہے - ہر ایک نے گھر کی راہ لی \*

2. Give a brief sketch of the life of میر شیر علی افسوس 15  
What led to his compiling the آرایش محفل , and what are the chief characteristics of the book ?

Or,

Write, in your own Urdu, what the author of فسانۂ عجائب describes of the state of Lucknow during his own time.

3. Describe how آرا انجمن آرا was rescued by جان عالم from the 10  
trap of جادوگر

4. Explain with reference to context :— 15

جن دانس و رقص و طائر کیوں نہ ہوں محکوم سب  
ہے سلیمان اندنوں فرمان روائے لکھنؤ  
یا تو ہم پھرتے تیر ان میں یا ہوا یہ انقلاب  
پھرتے ہیں آنکھوں میں ہر دم کوچہ ہائے لکھنؤ  
دشت غربت میں کیا برباد رحشت نے تو کیا  
دل سے ازتسی ہے کہیں اپنے ہوائے لکھنؤ  
یہ رہے آباد یا رب تابہ دور مشتری  
میں کہیں ہوں مانگتا ہوں پر دعائے لکھنؤ  
بلبل شیراز کو ہے رشک فاسخ کا سرور  
اصفہان اس نے کئے ہیں کوچہ ہائے لکھنؤ

## THIRD PAPER

*The questions are of equal value*

## FIRST HALF

N.B.—*Answers to be written in Urdu**Only THREE questions to be attempted*

1. (a) Describe the character of Prince Aziz as depicted by عبد الحليم شرر in his novel ملك العزيز رجنا. What is the position of عبد الحليم شرر as a historical novelist ?

(b) Give the plot of Agha Hashr's drama named خوبصورت بلا , and say what moral lesson is drawn therein by the author.

2. State the ماہیت of شعر. What are the essential qualifications (both gifted and acquired) of a true poet ?

3. (a) Distinguish between روز مرہ and معاورہ , giving illustrations.

(b) What does Hali say about figures of speech (صنائع و بدائع) as the basis of poetry ? Do you agree with, or disagree from him ? Give reasons.

4. (a) What was the object of محمد ہادی in writing his لیلی مجنون ? How do you like his style ?

(b) Give a short life of Sir Syed. Has he been a success as a reformer ?

5. (a) Which of Sir Syed's essays appeals to you most ? Give a gist thereof.

(b) How far did Sir Syed deviate from the style which existed at the time and how far has his new style been adopted by Urdu prose-writers ?

## SECOND HALF

*Attempt ANY THREE questions*N.B.—*Answers may be written in Urdu or in English.*

1. (a) What are the chief characteristics of Ghalib's poetry ? What is his position as a Qasida-writer قصیدہ گو ? How far has Iqbal succeeded in imitating Ghalib's poetry ?

(b) Give a life-sketch of Ghalib or Iqbal, pointing out the most prominent characteristic pervading in the poetry of either.

2. Explain, adding notes where necessary :—

شوق ہر رنگِ رقیبِ سر و سامان نکلا  
قیس تصویرِ ے پردے میں بھی عریان نکلا

زخم نے داد نہ دی تنگی دل کی یا رب  
تیر بھی سینے بسمل سے پر افشان نکلا  
سبز خط سے ترا کاکل سرکش نہ دبا  
یہ زمرد بھی حریف دم افعی نہ ہوا  
مری تعمیر میں مضمحلے اک صورت خرابی کی  
ھیولا برق خرمن کا ہے خرمن گرم دھقان کا  
دل نادان تجھے ہوا کیا ہے  
آخر اس درد کی دوا کیا ہے  
ہم ہیں مشتاق اور رہ بیزار  
یا الہی یہ ماجرا کیا ہے  
آتا ہے میرے قتل کو۔ پر جوش رشک سے  
موتا ہوں ارس کے ہاتھ میں تلوار دیکھ کر  
دامر ہر موج میں ہے حلقہ صد کام نہنگ  
دیکھیں کیا گذرے ہے قطرے پہ گہر ہونے تک  
تھی رطوبت میں شان کیا غالب کہ ہو غربت میں قدر  
بے تکلف ہوں وہ مشت خس کہ گلخن میں نہیں  
کس منہ سے شکر کیجئے اس لطف خاص کا  
پرسش ہے اور پائے سخن در میان نہیں

3. Explain with reference to the context :—

فکر انسان پر قوی ہستی سے یہ روشن ہوا  
ہے پر مرغِ تخیل کی رسائی تاکجا  
جل رہا ہوں کل نہیں پڑتی کسی پہلو مجھے  
ہاں دبو دے اے محیط آب گنگا تر مجھے  
چشمہ دامن ترا آئینہ سیال ہے  
دامن موج ہوا جس کے لئے رومال ہے  
آیا ہے آسمان سے اڑ کر کوئی ستارہ  
یا جان پڑ گئی ہے مہتاب کی کرن میں

ایک ہی قانونِ عالمگیر کے ہیں سب اثر  
 بوئے گل کا باغ سے گلچیں کا دنیا سے سفر  
 تیغوں کے سایہ میں ہم پل کر جوان ہوئے ہیں  
 خنجرِ ہلال کا ہے قومی نشان ہمارا

4. Translate, annotating the underlined words and expressions :—

چہوا جو گیسوئے عذریں کو تو سانپ پکڑا فسون سے گویا  
 لیا جو چشمِ سیدہ کا برسہ شکارِ میں نے کیا ہرن کو  
 تیر بارانِ بلا سے ہو گئی کش اپنی  
 رہ گیا دھقانِ دوائے ابرِ رحمت مانگتا  
 شانہ توڑتا تارِ گیسوئے -وز

پہل نہیں پاتا کوئی شاخِ صنوبرِ توڑ کر  
 غیرتِ میرِ رشکِ ماہِ ہو تم  
 خوب صورت ہو بادشاہِ ہو تم  
 آنکھیں مری کرے جو منورِ جمال یار  
 گہی کے چراغِ طور کے اریز جلاؤں میں  
 نقدِ معنی کا گنجدان نہ رہا  
 خوانِ مضمون کا میزبان نہ رہا  
 نذرِ سائل تھی جان تک لیکن  
 درِ خورِ ہمتِ اقتدار نہ تھا  
 ملک و دولت سے بہرہ ور نہ ہوا  
 جان دینے پہ اختیار نہ تھا

5. Scan the lines 1 and 5 of Question 3 and any two lines of Question 4.

## FOURTH PAPER

## FIRST HALF

[Full Marks—50]

1. Write an essay in Urdu on one of the following :—

(a) What was the influence exercised by Sir Syed Ahmad on the development of Urdu prose? Name the authors who came under his direct influence.

(b) What part did the Fort William College at Calcutta play in the 19th century in the development of Urdu prose?

(c) Account for the rise and development of Urdu novel, mentioning the chief works composed during the 19th century.

## SECOND HALF

*The questions are of equal value**Candidates are required to answer ANY TWO of the following questions*

1. Describe the new forms of Prose-composition which Urdu has borrowed from English literature.

2. Give a short account of the channels through which English influence has affected the Indian thought and literature in modern times.

3. Is Iqbal a communal or a national poet? Quote verses from his works in support of your answer.

4. 'Sharar was the leading Urdu-Novelist of his age.' Discuss.

5. Briefly narrate the part played by Sir Syed's efforts (best known as Aligarh movement) in the development of Urdu literature.

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## BENGALI (SUBSIDIARY)

## FIFTH PAPER

*Candidates are expected to answer all the questions in Bengali**The questions are of equal value*

1. Explain any two of the following passages, with reference to the context :—

(a) এখন দেখি, এ বেগ আমার একার নহে ; যে সময়ে উঠানে ছায়া পড়ে, নিত্য সে সময়ে কুলবধুর মন যাতিয়া উঠে, জল আনিতে বাইবে ; জল আছে বলিলেও তাহার জল ফেলিয়া জল আনিতে বাইবে । জলে যে বাইতে পারিল না, সে অভাগিনী ; সে গৃহে বসিয়া দেখে, উঠানে ছায়া পড়িতেছে, আকাশে ছায়া পড়িতেছে, পৃথিবীর রং কিরিতেছে ; বাহির হইয়া সে দেখিতে পাইল না, তাহার কত দুঃখ ।

(b) সংসারে বাহা দেখিতে পাই না, কবিতার কমনীয় স্নিগ্ধ আলোকে কখনও কখনও সেই স্পৃহণীয় শোভা নয়নগোচর হয়, এই জন্ত কবিতা হৃদয়হারিণী । সর্বত্র বাহা শুনি না, কবিতার অশ্রুট আলাপে সময়ে সময়ে সেই প্রীতিপবিত্র মধুর ধ্বনি মনুষ্যের প্রতিপথে প্রবেশ করে, এই জন্ত কবিতা

হৃদয়হারিণী। অথবা পৃথিবীর ফুলে ও ফলে, কিংবা পৃথিবীর কোন বস্তুতেই, যে রসের স্বাদ পাই না, কবিতায় কদাচিৎ তাদৃশ অনির্বচনীয় রসস্বাদে কৃতার্থ হই, এই জন্ত কবিতা হৃদয়হারিণী।

(c) নিশার স্বপন স্মৃথে স্মৃখী যে, কি স্মৃথ তার ?—

জাগে সে কাঁদিতে।

কণপ্রভা প্রভা-দানে বাড়ায় মাত্র আধার

পথিকে ধাঁধিতে।

মরীচিকা মরুদেশে নাশে প্রাণ ভূষা-ক্লেশে ;—

এ তিনের ছল সম ছল রে এ কু-আশার।

(d) মাতার কণ্ঠে শেফালি মাল্য

গন্ধে ভরিছে অবনী।

জলহারী মেঘ আঁচলে খচিত

শুভ্র যেন সে নবনী।

পরেছে কিরীট কনককিরণে,

মধুর মহিমা হরিতে হিরণে,

কুসুম-ভূষণ জড়িত চরণে

দাঁড়ায়েছে মোর জননী।

আলোকে শিশিরে কুসুমে ধাত্তে

হাসিছে নিখিল অবনী।

2. Analyse the character of Rama as drawn by Mr. Sarat Chandra Chattopadhyay in his *রামের স্মৃতি*, and explain why this wild boy was so submissive to his sister-in-law Narayani.

3. Rewrite briefly in your own words any one of the following stories :—

(a) *শুগুধন*—by Dr. Rabindranath Tagore.

(b) *মাষ্টার মহাশয়*—by Mr. Prabhat Kumar Mukhopadhyay

(c) *প্রেমের ঠাকুর*—by Prof. Khagendra Nath Mitra.

4. Amplify the idea contained in any two of the following passages :—

(a) বস্ত্রেরা বনে স্তম্ভর, শিশুরা মাতৃকোড়ে।

(b) পরনিন্দা মাৎসর্যের প্রধান সহচর।

(c) বড় কাষ হাতে এলে অনেকেই বীর হয়, ১০ হাজার লোকের বাহবার সাহনে কাপুরুষও অক্লেশে প্রাণ দেয়, বোর স্বার্থপরও নিফাম হয় ; কিন্তু অতি ক্ষুদ্র কার্যে সকলের অজান্তেও যিনি সেই নিঃস্বার্থতা, কর্তব্য-পরায়ণতা দেখান, তিনিই ধন।

5. Translate the following passage into Bengali :—

This is no festival of the rich. The Zamindar, the opulent money-lender, the well-to-do gentleman,—these are all there,—but lost to sight among the hundreds of thousands of the poor and needy. Ill-clad in a single garment of white, the pilgrims look almost as if they had adopted some sombre uniform for this great festival. Only here and there, a woman younger than the rest, has given her love of colour rein in a light red-bordered *sari* that adds a welcome touch of brilliance to the white-robed throng. But for most of them, the joys and vanities of life are past.

## SIXTH PAPER

*The figures in the margin indicate full marks*

1. Write an account of either the Dharmamangal poems by 20  
Ghanaram, or the Padmāvat by Ālāol.

2. Discuss the debt of Bengali literature to the Vaisnava movement 20  
inaugurated by Chaitanya Dev and carried on by his followers.

3. What peculiarities do you observe in the grammatical structure of 20  
the Bengali language in contrast with your own vernacular? Give examples.

4. Give the opposite genders of eight of the following words :— 8

(1) গরু, (2) মাষা, (3) চাকর, (4) সিংহ, (5) বধু, (6) মালিনী,  
(7) যুবক, (8) ছেলে, (9) চকা, (10) ছাত্র, (11) গয়লা, (12) ধোপানী।

5. Translate the following passage into English :— 16

ফরাসী অধিকারভুক্ত গরিটীর নিকট এণ্টুনি কবিওয়ালার বাগানবাটীর ভদ্রাবশেষ এখনও দৃষ্ট হয়। এণ্টুনি পর্তুগিজ ছিলেন; ইহার ভ্রাতা কেলি সাহেব সেই কালের একজন ক্ষমতাপন্ন ও অর্থপ্রতিপত্তিশালী ব্যক্তি ছিলেন; এণ্টুনি একটি ব্রাহ্মণ-রমণীর প্রেমে পড়িয়া হিন্দুভাষণ হইয়া পড়েন, তিনি দোল দুর্গোৎসবে সাগ্রহে যোগ দিতেন, এবং অবশেষে কবির দল বাঁধিয়া নিজে আসরে নামিয়াছিলেন।

6. Translate the following passage into Bengali :— 16

As soon as the peace was concluded, the treacherous Shyr Khan summoned his principal officers, and said to them, 'Is there any of you brave enough to go and storm the Moghul camp?' At first not one of the Afghan officers would undertake the task. At length a person called Khuas Khan said, 'if he would give him a detachment of good soldiers and a number of war elephants, he would attempt it, and exert himself to the utmost'; adding, 'this is a business of chance; but let us see to whom "God will give the victory".'



## HINDI (SUBSIDIARY)

## FIFTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*The first two questions and one of the remaining three are to be answered*

1. Explain any two of the following, giving the context and adding 16  
explanatory notes, where necessary :—

(a) सुन्दरी के सुर की झंकार की तुलना नहीं हो सकती थी—उस स्वर में प्राणों की व्याकुलता मूर्तिमती हो रही थी। स्थान, काल, गायिका का रूप, उसका वेदनामय स्वर—इन सब ने मिलकर एक अपूर्व भाव का संचार किया था। विपुल जनसंघ उस भाव के आवेश से स्तब्ध और तन्मय हो गया था।

(b) वह छोटा सा रम्य स्थान, सचमुच स्वर्ग का टुकड़ा था। उसमें रहने का समय भूस्वर्ग में रहने के समय की भांति था। चिन्ता बहुत कम थी, वासनाएं भी इतनी नहीं थीं, विचार भी सीमाबद्ध स्थान में विचरण करता था। पर हाय ! उस समय उस स्थान का हृदय में इतना आदर न था, स्वर्ग में रह कर कोई स्वर्ग का आदर ठीक नहीं कर सकता है।

(c) राजदंड के मणिरत्नों की आभा-प्रभा के ऊपर मसीही कास का चिन्ह सांसारिक विभव के ऊपर धर्मार्थ बलिदान की कैसी उत्कृष्ट दीक्षा दे रहा था कि सहृदय दर्शक उस हृदयग्राही दृश्य को क्या कभी भूल सकता है ! महाराणी का स्वर्णयुग सुन्दर राजदंड जिसके ऊपर कपोत की एक मूर्ति बनी है, वह भी बहुत ही मनोहर है।

2. (a) Give the substance of any one of the following passages :—

10

(1) जिस समय तक चिकित्सक की यह अभिलाषा रहती है कि उसके कुछ शरीर से देश की कुछ सेवा हो, जबतक उसे निर्धनों की सहायता करने की चिन्ता रहती है, तबतक तो वह उस कार्य को पूर्णरूप से तल्लीन होकर करता है, और तभी तक उसे उस कार्य के करने में वास्तविक आनन्द का अनुभव होता है। पर जिस समय उसे द्रव्य का लोभ हो जाता है, उसी क्षण उसे द्रव्योपाजन की चिन्ता लग जाती है ; देश-प्रेमा एवं निर्धनों की सहायता के भावों का उसके हृदय में लवलेह तक नहीं रह जाता।

(ii) संसार में कोई भाग्य को मानता है और कोई कर्म को, तथा कोई ऐसा भी कहता है कि दोनों एक ही हैं। चाहे कोई कुछ भी क्यों न माने, इतना तो सब को मानना ही पड़ेगा कि प्रत्येक मनुष्य उत्तम और अधम मार्ग में से जिसपर वह चाहे चलने में स्वाधीन है और उसे अपने लाभ और हानि के समझ लेने का पूरा अधिकार है ; क्योंकि मनुष्य किसी नदी में तिनकों के समान बह नहीं जाता, बरन वह अपने को तैरता हुआ पाता है और भली भाँति समझता है कि मैं जल के प्रवाह को काटकर तट पर पहुँच सकता हूँ, कारण निस्सन्देह हमलोग किसी शृङ्खला से जकड़ कर

(b) Translate the following into simple Hindi :—

8

For some time it went well with Mirā. Absorbed in her worship she gave herself up entirely to her devotional exercises. But she did not shave her head, she did not wear the bark of trees, nor did she go through any religious austerities. On the other hand, a born princess and wife of a prince, she decorated herself richly as she would adorn the image she worshipped.

3. Who is known as the father of modern Hindi literature ? What do you know of him and what are his most important works? 16

4. Under what circumstances was Sita repudiated, and what do you think of Rama's conduct in banishing her? 16

5. (a) Give the Sanskrit forms of seven of the following words :—

7

सुभाय, हिय, घाव, आँख, अमिय, माँह, मोतिय, मैला, तनिक, नाह, पोता, सीस, रिस, बखान, पाहन, झरना ।

(b) Explain three of the following expressions :—

9

(1) घरके आगे सदा हाथी झूमा करता था । (2) रोटियों का भी ठिकाना न रहा । (3) मारे मोद के फूली न समाती थी । (4) रोंगटे खड़े होना । (5) घात पाना । (6) मन की कली खिलना । (7) भाग्य का पासा गिरना । (8) हाथ लगना । (9) रखे भीजना । (10) इति श्री होना । (11) पत रहना । (12) नौ दो ग्यारह होना ।

## SECOND HALF

*The FIRST TWO questions and ONE of the remaining three are to be answered*

1. Explain fully any one of the following :—

20

(a) श्याम सरोज दामसम सुन्दर ।

प्रभुमुञ्ज करिकर सम दशकंधर ॥

सो भुज कंठ कि तव असि घोरा ।  
 सुनु सठ अस प्रमान पन मोरा ॥  
 चंद्रहास हरु मम परितापा ।  
 रघुपति-विरह अनल-संतापा ॥  
 सीतल निशि तव असि बरधारा ।  
 कह सीता हरु मम दुखभारा ॥

(b) चिंताज्वाल शरीरबन दावा लगि लगि जाय ।  
 प्रकट धुवां नहिं देखिये उर अंतर धुंधुवाय ॥  
 उर अंतर धुंधुवाय जरै ज्यों कांच की भट्टी ।  
 जर गयो लोहू मांस रह गई हाड की ठट्टी ॥  
 कह गिरधर कविराय सुनो हो मेरे मिंता ।  
 वे नर कैसे जिये जाहि तन व्यापत चिंता ॥

(c) यज्ञ-श्राद्ध-साधन सोइ साथ ।  
 इमि सोहत तहं कोशलनाथा ॥  
 श्रद्धा मनहुं दृश्यतनु धारी ।  
 सोहत संत प्रयत्न मंझारी ॥  
 जल सन उठत बराह समूहा ।  
 चलत रूख-दिशि नभचर जूहा ॥  
 हरी घास जहं बैठ कुरंगा ।  
 चलयो छलत सोइ सौरभि संग ॥

2. Write in simple prose the substance of any one of the following :— 14

(a) हरि से तू जनि हेत कर, कर हरिजन से हेत ।  
 माल मुलुक हरि देत है, हरिजन हरि हीं देत ॥  
 निन्दक नियरे राखिये, आंगन कुटी छवाय ।  
 विन पानी साबुन विना, निर्मल करे सुभाय ॥

(4) मेरो मन अनत कहां सुख पावै ।  
 जैसे उडि जहाज को पंछी फिरि जहाज पर आवै ॥  
 कमलनयन को छांड़ि महातम और देवको ध्यावै ।  
 परम गंग को छांड़ि पियासो दुर्मति कूप खनावै ॥

- (c) फूटहि सो नवनन्द विनासे गयो मगध को राज ।  
 चन्द्रगुप्त को नासन चाह्यो आपु नसे सह साज ॥  
 जो जगमै धन मान और बल अपुनो राखन होय ।  
 तो अपुने घरमै भूले हू फूट करो मति कोय ॥

8. Give the substance of the conversation between Ravan and Hanuman when the latter was taken captive to the former's court by Indrajit. 16

4. (a) Explain the allusion contained in *any one* of the following :— 6

- (i) समर बालि सन करि यश पावा ।  
 सुनि कपिवचन विहंसि बहरावा ॥  
 (ii) हरि मारन हित खँचत बाना ।  
 रह्यो दछिन कर चित्त समाना ॥  
 मारत बज्र मनहुं सुरनाथा ।  
 भयो शम्भु-दग-बस जड़ हाथा ॥

(b) When is the sign *को* of the objective case used, and how are the gender and number of the governing verb determined in such cases? 4

(c) Give the meanings of *six* of the following words :— 6

पौरिया, सीरे, रारि, अनघैरी, लबार, बहोरि, बापी, रोपी, पोच,  
 दिशिप, बरूयन, अखारन्ह, परखियहु, चितवहिं, सौं हैं ।

5. What is the original meaning of *कवि* and what is meant by *काव्य* ? 16  
 Is rhyme or metre always necessary to constitute a *Kavya* ? Can a *Kavya* be without a sentiment (*रस*) ? What are the *Rasas* ? Give an example of *करुण-रस* from your text.

## SIXTH PAPER

*The questions are of equal value*

### FIRST HALF

1. Translate *any one* of the following passages into English :—

(a) उज्जैन नगरी में राजा भोज ऐसा विद्या-रसिक, गुणज्ञ और दानशील था कि विद्या की बुद्धि के प्रयोजन से उसने यह नियम प्रचलित किया था कि जो कोई नवीन आशय का श्लोक बनाके लावे उसको एक लाख रुपये दक्षिणा दी जाय । इस बात को सुनकर देश देशान्तर के पंडित लोग नये आशय के श्लोक बना कर लाते थे ।

- (b) लिजटा नाम राक्षसी एका ।  
 रामचरन-रति निपुन बिबेका ॥  
 सबहिं बुलाइ सुनायसि सपना ।  
 सीतहिं सेइ करहु हित अपना ॥  
 सपने बानर लंका जारी ।  
 जातुधान-सेना सब मारी ॥  
 खर आरुढ़ नगन दस सीसा ।  
 मु'डित सिर खंडित भुज बीसा ॥  
 एहि बिधि सो दक्षिन दिशि जाई ।  
 लंका मनहु बिभीषन पाई ॥

2. 'Translate one of the following passages into Hindi :—

(a) Nazir is the solitary figure who stands to refute the charge of want of originality in Urdu literature. He flourished in Agra about the second half of the 18th and the first half of the 19th century. He came of humble parents and was brought up in adversity.

(b) Hinduism of the Ramanuja cult is wholly opposed to the practice of untouchability. The sayings and doings of Acharyas of this school of Hinduism are replete with proofs of this statement. This is so different from the restrictions and prejudices prevailing among the orthodox followers of this very school in the present day.

3. Give in Hindi the substance of one of the following extracts :—

- (a) साईं हंस न आवहीं बिन जल सरवर पास ।  
 निरफल तरवर ते डरैं पक्षी पथिक उदास ।  
 पक्षी पथिक उदास छांह बिस्राम न पावैं ।  
 जहं न प्रफुलित कमल भ्रमर तहं भूलि न आवैं ।  
 कह गिरिधर कविराय जहां यह बूझ बढ़ाई ।  
 तहां न करिये सांझ प्रातही चलिये साईं ॥
- (b) कान होते बहरे बने हैं अंधे आंख होते,  
 बाचा चारु होते मूक रहना बिचारा है ।  
 कर होते लुंज है औ पंगु है सुपद होते,  
 बलवान होते कहां बल का सहारा है ।  
 हरिऔध झुखित महा है देख देख दृष्टा,  
 तेज होते परम तरणि बना तारा है ।  
 तन होते तन बिन गये हैं ए अतन बव,  
 हिन्दुओं के तन की निराली रकभारा है ॥

4. (a) Rewrite the following correctly and give reasons for your corrections :—

प्रबंध अच्छी हो तो गृहस्थी से उतना ही सुख मिलती है जितने कि बड़ी राज्य का सुख उसके राजा को होता है। घर का प्रबंध स्त्रियों के हाथ पर है क्योंकि वह ही घर में रहती है।

(b) Give the Tatsama (Sanskrit) forms of any five of the following words :—

साईं, बिलाम, सांझ, सपना, जातुधान, दक्षिण, खेत, जमुना।

### SECOND HALF

N.B.—Attempt two questions only.

5. Compare Sur and Tulsī under the following heads :

(i) religious views, (ii) lyric element,

6. Briefly describe the various stages of heroic poetry (वीरकाव्य) in the history of Hindi literature.

7. Write a note on the evolution of Hindi prose literature up to the end of the 19th century.

8. Write brief notes on any three of the following :—

मीरा, अष्टछाप, बिहारी, जायसी, लखूछाक, पद्मसिंह शर्मा, महावीर-प्रसाद द्विवेदी, प्रेमचन्द।

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## ORIYA (SUBSIDIARY)

## FIFTH PAPER

*The questions are of equal value*

1. Explain with reference to the context any two of the following : -

(a) କାହିଁ ସେ ଅଯୋଧ୍ୟା ଧନ୍ୟା ଯୋଧେନ୍ ଜନମା  
 କ୍ଷତ୍ତ ତେଜୋଭାନ୍ ମହିଁ ଉତ୍ତମ ପହଲେ ।  
 ହିମୋକ୍ତ ହିମାତଳ ଶିରେ ବନମଣି  
 ହିମରଶ୍ମି ବଞ୍ଚେ ଯଥା ନିଶା ପ୍ରଭାତେ ॥

(b) ଯେଉଁମାନେ ଏହି ଶିକ୍ଷାର ଆଲୋକକୁ ଆସି ଅଛନ୍ତି, ସେମାନଙ୍କ  
 ମଧ୍ୟରୁ କାହାର କାହାର ଚକ୍ଷୁ ଫିଟି ଅଛି ।

(c) ଅମର ଚନ୍ଦ୍ର ଯେ ମହାମନ୍ତ୍ରୀ  
 ହିମେ ହିମେ ହିମାଳୟ ହେ ।  
 ଧରଣୀର ବେଶୀ କେତେ ଗିରିଶ୍ରେଣୀ  
 ନିର୍ଦ୍ଦର ମୁକୁତାମୟ ହେ ॥  
 ସେ ଶିଳା ଲାଳାରେ ଘନାଭୂତ ସୁଧା ପାନେ  
 ପାପ କର କ୍ଷୟ ହେ ।  
 ଦଗଳୁ ବହାଣୁ ବାୟୁ ସଦାଗତ  
 ଶ୍ବାସେ ଶ୍ବାସେ ଶ୍ବାସମୟ ହେ ॥

2. Translate the following extract into Oriya :—

A man had a daughter that was married to a gardener. After a time he went to his daughter, and enquired how she was and how all things went on with her. She said, "All things are going on well with me, and I have only this wish, that there may be a rainfall." How humble are the expectations of those who are lowly placed!

3. Translate into English :—

ବ୍ୟକ୍ତିଗତ ଜୀବନର ସମସ୍ତ ସମ୍ପାଦ ବା ଜାତି । ଜାତିର ପ୍ରତ୍ୟେକ  
 ବ୍ୟକ୍ତି ସ୍ୱାଧୀନ ହେଲେ ସେ ଜାତି ସ୍ୱାଧୀନ ହେଲା ବୋଲିବାକୁ ହେବ ।  
 ତତେ ଲୋକ ଯାହା ଇଚ୍ଛା କାହା କରେ, ଯେତେବେଳେ ଯେଉଁ ଖେତର  
 ଉପେ ତାହାହିଁ କାର୍ଯ୍ୟରେ ପରିଣତ କରେ । ଏପରି ଲୋକକୁ କି ସ୍ୱାଧୀନ  
 ବୋଲି ଯିବ ? କଦାଚ ନା— ସେ ସ୍ୱାଧୀନ ନୁହେଁ ସେତାଙ୍କୁ ।  
 ସ୍ୱାଧୀନତାର ପ୍ରକୃତ ଅର୍ଥ ଅସ୍ୱାଧୀନତା । ସ୍ୱାଧୀନ ମାନବ ବଚେକର  
 ବଣିଭୂତ ।

4. (a) Expand the idea contained in one of the following :—

- (i) ସ୍ତବେ ଚର କନା ହଜିଲେ ମାଠି ।  
 (ii) ଚର ଥର କଲେ ଗଢ଼ିଆ ଗଜା ।

(b) Give the exact meaning of any four of the following expressions :—

ଓଳିଆରୁ ଗଜା, କଥା ତଳେ ନ ପକାଇବା, ଦାଉସାସୁବା, ଭଣ୍ଡୁକା ଧାନ  
 ଗଜା, ଏ କାଳେ ପଣି ସେ କାଳେ ସିବା, ଭୁଣ୍ଡ ଶୁଣାଇବା ।

5. Give, in simple Oriya, your summary of the ideas contained in ଏ ପୁସ୍ତକ ଅମୃତମୟ ହେ or in any other poem that you may have read of Madhusudan Rao

### SIXTH PAPER

*The questions are of equal value*

1. Describe the framework of the Oriya romance.

Or,

Estimate the literary value of the *Rasakallola*.

2. Give brief accounts of the lives of any four of the following writers :—  
 Sārālā Dās, Fakiramohan Serāpati, Rāma Dās Sadānanda Kavisūrya-  
 brāhmā, Achyutānanda Dās, Lokanāth Dās and Bhūpatipāṇḍit.

3. Draw a line of comparison between the writings of Upendrabhaṇḍa and those of Abhimanyu Sāmantasiddhāra.

Or,

Give the subject-matter of the *Samrataraṅga*

4. Give the feminine forms of any eight of the following :—

ବାଘ, କକା, ନନା, ବରଢ଼ି, ତଅର, ଗୁଢ଼ିଆ, ଧୋବା, ଟୁଗା,  
 ମାଲୀ, and ତେଲ ।

5. (i) Give the future indicative forms of Oriya ଦା ଥାଉ in all persons and numbers.

(ii) Decline ଦୁ in singular number only and in all cases.

6. (i) Distinguish between the plural suffixes ଦୁଢ଼ି and ଦୁଡ଼ା, quoting examples

(ii) Frame sentences to illustrate the two different meanings of two of the following words :—

ସେଣ୍ଟ, ତହୁଁ, and ତେବେ ।



## MAITHILI (SUBSIDIARY)

## FIFTH PAPER

*The questions are of equal value*

1. Explain in Maithili any one of the following :—

- (a) घर घर भरमि जनम नित, तनिकां केहन बिवाह ।  
 से अब करब गौरीबर, ई होय कतय निवाह ॥  
 कतय भवन कत आंगन, वाप कतय कत माए ।  
 कतहु ठओर नहिं ठहेर, ककर एहन जमाए ॥  
 कोन कयल एह असुजन, केओ न हिनक परिवार ।  
 जे कयल हिनक निबन्ध धिक थिक से पजिआर ॥  
 कुल परिवार केओ नहिं जनिका, परिजन भूत बैताल ।  
 देखि देखि झुर होए तन के सहय हृदयक साल ॥  
 विद्यापति कह सुन्दरि धरहु मन अवगाह ।  
 जे अकि जनिक विवाही तनिकां सेह पै नाह ॥
- (b) चानन भेल विखम सर रे, भुखन भेल भारी ।  
 सपनहुं हरि नहिं आएल रे गोकुल गिरधारी ।  
 एकसरि ठाढ़ि कदम तर रे, पथ हेरथि मुरारी ।  
 हरि विनु देह दगध भेल रे, झामल भेल सारी ।  
 जाहु जाहु तोहें ऊधव हे, तोहे मधुपुर जाहे ।  
 चन्द्रवदनि नहिं जीउति रे, वध लागत काहे ॥  
 भनहि विद्यापति तन मन दए सुनु गुनमति नारि ।  
 आज आओत हरि गोकुल रे, पथचलु झटझारि ।

2. Explain in Maithili and with reference to context any two of the following :—

- (a) चिन्हारे अहां छी विरञ्जि प्रपौखे ।  
 कुकर्मो अहां छी करैछी कि श्रौखे ॥  
 गिरीशाख ना छोड़ि ई की करैछी ।  
 परखी अँहां छयसौ की हरैछी ॥
- (b) कीरे कीरे कह कि झट दै मूह कियै शुखैछी ।  
 बीरे बीरे बहुत जन छी, तास की हेतु भेलौ ॥  
 हाहौ हाहौ बिपति वढ़ छौ, काल लझा समैलौ ।  
 लझाध्वंसी कपिक सदशे, दोसरो फेरि भैलौ ॥

- (c) रे रे कुमति कठोर मनुष, गणना रघुनन्दन ।  
 नदी कि गङ्गा होथि, वृक्ष की छथि हरिचन्दन ॥  
 की एरावत करटि, इन्द्रवाजी की छथि हय ।  
 स्त्री की रम्भा होथि मूढमति सुन रे निर्भय ॥  
 की कृतयुग युग में थिकथि, धन्वी मनसिज के गणत ।  
 जनि प्रताप त्रिभुवन प्रकट, हनुमान कपि के कहत ॥

3. (i) Explain in English any one of the following :—

- (a) राम कहल शुनु लक्ष्मणवीर, असमय त्यागु धनुष ओ तीर  
 अहं क सत्व हमरा अछि ज्ञात, नहि कर्तव्य एखन उत्पात ।  
 देखइत छी जे ई संसार, सकल भरल विष विषय विकार ।  
 विद्युत जेहेन चमकि छपि जाय, जानव तेहन भोग्य समुदाय ।  
 अनल तप्त लौहक पर जेहन, वारि बिन्दु आयुक्त गति तेहन ।  
 भेक व्याल गल मै पड़ि जाथि, टप टप तैओ माछी खाथि ।  
 काल व्याल से जन छति प्रसन्न, तदपि न विषय मनोरथ अस्त ।  
 देह भोग लय पल पल खिन्न, ई शरीर पुरुषहु सौं भिन्न ।  
 बन्धु-समूह जनित सुख भोग, जानव नदिआ नाव संयोग ।
- (b) कर्मपुरोहित अतिस्वच्छन्द, परघर नाचथि मूसर चंद  
 शान्तजनक भूपक नन्हि खास, सभहिक गुरु गोवर्द्धनदास  
 जनकक सभा तोहर वड़ गाल, उपलक्षण ढोढ़ी धरि माल  
शतानन्द तों छें वड़ भूच, नां वड़ ऊच कान डूहू बूच  
 शतानन्द कहलनि खिसिआय, उचिते कहले संग विधुआय ।  
 काटल किएक रेणुका मांथ, ई बकबाद वृथा भृगुनाथ  
 ब्राह्मण कां धिक क्षात्र प्रताप, तत्व विचारि करी तौ पाप  
 आनक दोष अणुक परमान, देखथि अपन न विल्व समान ॥

(ii) In case of (a), bring out the philosophical import contained in the same, and in case of (b), write notes on words underlined therein.

4. Discuss the character of Lakshman as depicted in Chanda Ramayan, and give a critical estimate of him and his work.

Or,

Write short notes on Chanda Jha, and institute a comparison between his Ramayan and that of any other which you have come across. Do you mark any change in Maithili language during his period as distinguished from the time of previous writers? Discuss.

5. Translate the following extract into English :—

एहि तरहे' शान्तिपूर्वक महाराज युधिष्ठिर राज्य करय लगावाह, प्रकृतिक अनुसार पनरह वर्ष काल वीति गेल । बीच बीच में भीमसेनक उत्कट कथा सं धतराष्ट्र बहुत दुःखित होइत छलाह । कहुखन भीम धतराष्ट्र के' सुनायक इहो कहैत छलथिन्ह जे वृद्ध लोकक ई कहव थिक जे लज्जा आंखिहिक घम्स थिकैक । नेखहीन मनुष्य के' लाजक लेशो नहि रहैत छैक । निर्लज्ज पुरुष बिना अपन पेट भरले' उचित अनुचितहुक विचार नहि करैत अछि, इत्यादि अनेक मार्मिक कथा सँ व्याकुल भै धतराष्ट्र पुक्री पाडि पाडि कनैत छलाह । यदि कदाच युधिष्ठिर हिनक ई अवस्था देखि लैत छलाह तँ हिनका बहुत आश्वासन दैत छलथिन्ह ।

6. Translate the following into Maithili :—

Mount Everest is five and half miles high. There are many causes which make it very hard to reach the top of a high mountain. The first cause is the cold. The air is very cold at the top of the great mountain. The travellers must cover their hands, feet, and their faces, otherwise they will freeze. Before this year, men twice tried to reach the top of Mount Everest once in year 1922 and again in the year 1924, but without any success worth the name. But this year again some European gentlemen flew from Lalbali, in Purnea District and at last explored the hidden region.

## SIXTH PAPER

*The questions are of equal value*

### FIRST HALF

*Only THREE questions are to be attempted*

1. Frame sentences to illustrate clearly the use of any four of the following :—

- (i) जानी ढोढ़क मन्त्र ने, दी दराधक माथा हाथ ।
- (ii) वरे बुद्धिबक तँ जैतुक के छेत ।
- (iii) ने कोलह गाड़ी, ने महुँकारक पूजा करी ।
- (iv) खेवो दी, भसिअयलो जाइ ।
- (v) भोज काल कुमहड़ रोपव ।
- (vi) गंगाक आगां कूपक दोहाइ ।

2. Expound the samasas and give meanings of any six of the following :—

भुतचट्ट, वहरघरा, पिठिहांसू, महिंसमोड़, घरजमैआ, पथरौटी, अलग-  
झुहिआ, घरघोसड़ा ।

3. Give the feminine of the following :—

नौआ, हाथी, सोनार, छागर, सोति, भाय, राजत, कुकुर, चमार ।

4. Give antonyms of any seven of the following :—

कड़िगर, उकाठी, अबल, भुसकौल, टेढ़ गाढ़, हल्लूक, सुखायल ।

5. Re-write the following after making necessary corrections :—

दिनेशवाबू बजार रँ दौड़ल अवैत छेलाह । भूखें पिआसें पांजर बैसल छलैक । रास्ता में एक वहलमान कहलकैक “हमर टाका दय दिअ नहिं तँ धोती छिनि लेवौक” । सुनैत दिनेशवाबू ज्वर भय गेल । हमहु कोनो सहायता नहिं दय सकलि, दिनेशवाबू के प्राणलय पड़यलाह ।

## SECOND HALF

*Only THREE questions are to be attempted*

1. Compare the modern Maithili with that of the fourteenth century, making mention of the distinguishing features.

2. What are the general characteristics of the poems of Vidyapati ? Why are his poems equally popular in Maithili, Bengali, and Hindi ?

3. Write short notes on the life and works of :—

(i) गोविन्ददास झा ।

(ii) लोचन कवि ।

(iii) मनबोध कवि ।

4. State who, among the writers from Jyotirishwar down to Chande Jha has done the greatest service to Maithili literature. Give reasons for your answer.

5. Name the language which has influenced Maithili the most. Give reasons for your answer.

## ASSAMESE (SUBSIDIARY)

### FIFTH PAPER

*The figures in the margin indicate full marks.*

*Answers may be given EITHER in Assamese OR in English.*

1. Ascertain the position of *Kathā-Gītā* in the history of Assamese prose literature in the light of the following remarks of Sir Prafullachandra Rai :— 20

‘Assamese prose literature developed to a stage in the far distant sixteenth century which no other literature of the world reached except the writings of Hooker and Latimer in England. The *Kathā-Gītā* shows clearly that the Assamese literature developed to a standard in the sixteenth

century which the Bengali literature had reached only in the time of Iswar Chandra and Bankim Chandra."

Or,

Give a brief account of the life of Bhattadeva, and examine his position in the history of Assamese literature and of the Vaishnava movement in Assam.

2. Write a critical estimate of the ballad *Barphukanar Git*, dealing with the following points : the historical back-ground, delineation of the character of the historical personages, date of composition, and its value as a contemporary historical narrative. 20

Or,

'The character of Badanchandra resembles that of the protagonist of a Greek tragedy.' Delineate the character of Badanchandra Barphukan as it comes out in the ballad *Barphukanar Git*.

3. Compare and contrast the diction of *Rukminiharan* with that of contemporaneous Bengali poetry. Support your answer with illustrative references and quotations. 15

Or,

State who was Bedanidhi and what part he played in *Rukminiharan*.

4. What glimpses of the Assamese society of the early nineteenth century can be obtained from Mr. Bardoloi's *Manomati* ? 20

Or,

Delineate the character of Pamilā in the light of the following verses :—

(“মনোমতী”ৰ পমীলাৰ উদ্দেশ্যে ।)  
 পমীলা, পমীলা তুমি সখীৰ প্ৰেমত ।  
 কৰিলা নানান লীলা এই সংসারত ॥  
 ছলনাৰে তুমি মান কত নচুৱালা ।  
 সখীয়াৰ স’তে দুয়ো সতীত্ব ৰাখিলা ॥  
 সখীৰূপে হৃদয়ত থাপি মনোমতী ।  
 ঢালিলা শাস্তিত তুমি প্ৰেমিকাৰ প্ৰীতি ॥  
 অদৃষ্টতে উতপনা তুমি বীৰ-নাৰী ।  
 দেখালা চানেকি তাৰ শত্ৰুক সংহাৰি ॥  
 মনোমতী উষা, তুমি সখী চিত্ৰলেখা ।  
 কলিৰ কালৰ দুয়ো সৌন্দৰ্য্যৰ বেখা ॥

5. Explain three of the following passages with reference to the context :—

8 × 5 = 15.

(a) যেন তৈল বিন্দুমাত্ৰো জগৰ একপ্ৰদেশত পৰিলে সকল জলক ব্যাপন, ধূলীত পৰিলে পুহু সেহি মতে বঃহ, তেমনে বিশিষ্ট জনত উত্তম কথা অলপ কহিলে সকল লোকতে প্ৰবৰ্ত্তে ।

(b) একে হৰিবংশ কথা অমৃত সাক্ষাত ।  
 আৰো ভাগবত কথা মিশ্ৰ দিলোঁ তাত ॥  
 ছয়ো কথা পদবন্ধে কৰিছোঁ মিলাই ।  
 যেন মধু মিশ্ৰ হুখে অতি স্বাদ পায় ॥

- (c) তাঁতীৰ হাতৰ কাপোৰখনে জগতখন জুৰিলে,  
তথাপি তাঁতীৰ গা উদি,  
ঘিণাই বৰফুকনক মাৰিবলৈ ধনী বৰবৰুৱাই  
ৰাজমাওক সুধিলে বুধি।

(d) যৌবনৰ হেনো এচাতি পচোৱা বতাহ আছে। সেই পচোৱা বতাহ চাতি হেনো সকলো মানুহৰ গাত এবাৰ লাগে। আৰু সেই বতাহ লাগিলে হেনো গাঁৱলীয়া ডেকাই এঠাইত এটা লেঠা লগাই 'কেচাৰি' ঘৰত উপস্থিত হয়।

6. Give the substance of the following passage :—

10

বুৰঞ্জী-সাহিত্যৰ অভাব ভাৰতীয় সভ্যতাৰ এটি চকুত লগা কেৰোণ। অনিত্য সংসাৰ, অবিদ্যৰ আত্মা, এইবোৰ আধ্যাত্মিক ভাবৰ সোঁতত ভাৰতৰ চিন্তাধাৰা প্ৰবাহিত হৈছিল। ৰাজ-ৰাজ্যোদানৰ খোৱা-কাষোৰা, পাত্ৰ-মন্ত্ৰীৰ ছল-চক্ৰান্ত, শত্ৰুতা-প্ৰতিযোগিতাৰ ঘাত-প্ৰতিঘাত, ইত্যাদি খন্তেকীয়া পাৰ্থিৱ বিষয়ত ভাৰতীয় চিন্তাই উপযোগী ক্ষেত্ৰ নোপোৱাত ভাৰতৰ ৰাজ-কাহিনী এটি উপেক্ষিত আলাগী বস্তু। এনে স্থলত অসমীয়া বুৰঞ্জী-সাহিত্য অসমীয়াৰ, এনে কি ভাৰতবাসীৰো গৌৰৱৰ বিষয়। আমাৰ ধ্ৰুৱ বিশ্বাস অসমীয়া বুৰঞ্জী-সাহিত্যৰ ঐশ্বৰ্য্য-সম্ভাৰ জগতৰ আগত পৰিপাটীকৈ দাঙি ধৰিব পাৰিলে জগতৰ সুধীবৃন্দ বিস্মিত আৰু মুগ্ধ নহৈ নোৱাৰিব, আৰু তাৰ লগে লগে অসমীয়াৰ আত্ম-সন্মান আৰু প্ৰতিষ্ঠাৰ পৰিমাণ বাঢ়িব।

## SIXTH PAPER

*The figures in the margin indicate full marks*

*Answers may be given EITHER in Assamese OR in English*

1. What do you know of the movement of the early Christian missionaries in Assam, and the influence it exercised over the modern Assamese language and literature? 14

*Or,*

Make a brief survey of the Assamese literature of the earliest times down to the commencement of the age of Sankara-Deva.

2. Briefly narrate in Assamese all that you know of the earliest prose-writings of the Assamese language. Whom do you consider to be the foremost among the writers of early prose? Give a short account of his life and writings. 18

*Or,*

Write short notes on any three of the following :—

বৰগীত, নামঘোষা, বিয়ানাম, and আনন্দৰাম টেকিয়াল কুকন।

3. Why is the age of Sankara or the মহাপুরুষীয়া যুগ said to be the renaissance period of the Assamese language? Give a short account of the writings of Ananta Kandali. 18

4. What are the different classes of prose-writing, according to the author of Sahitya-Vichar? Give a brief description of each. 20

Or,

Discuss the general characteristics of literature. What is the distinction between language and literature?

5. What are the different forms of the Assamese Sabda-Vibhaktis? Give the declension of নৈ in the singular number to illustrate your answer. Decline সি or তই in the 3rd and the 4th and কোন or তেওঁ in the 5th and 7th case-endings. State the feminine forms of—পগলা, বাকনি, মোমাই, দদাই, and ফুকন. 15

6. How are the plurals formed or plural senses expressed in Assamese? Give examples to illustrate your answer fully. State the plural forms of—ডাঙৰীয়া, কি, and লৰা. In what senses are জন, খন, গছ, and ডাল added after words? Give an example of each. 15

Or,

How are the different kinds of the past tense formed in the Assamese language? Conjugate the root যা or দি to illustrate your answer. What is meant by পাঁচনি-কিয়া? Give the পাঁচনি forms of খা in স্বৰূপ বৰ্তমান and বাখ in অপূৰ্ণ ভূত tenses.

## PALI (BASIC LANGUAGE)

### SEVENTH PAPER

*The figures in the margin indicate full marks*

1. *Either*, Discuss the question of the home and the origin of Pali 12

Or, Account for the resemblance of the Jātaka stories with popular tales of other literatures, and give illustrations in support of your answer.

2. Translate into English or your own vernacular *any three* of the following extracts, adding philological notes on the words italicized :—

12+6=18

(a) Anupubbena vaḍḍhetvā 'satena dethā' ti vutte 'amhākaṃ esa bahūpakāro, tumhehi pana saddhiṃ mettā hotū' ti kakhāpana-sataṃ gahetvā adamsu. Te taṃ gahetvā suvaṇṇapaṇjare *pakkhāpito* nānappakāreṇa macchamamsena c'eva phalāphaleṇa ca paṭijaggimsu.

(b) Te pi dve janā ekasmiṃ phalake nipannā ekam dipakam pāpuṇṇesu. Tattha so *nahāpīto* sakuṇe māretvā pacitvā khādanto upāsakassāpi deti. Upāsako 'alam *mayham*' ti na khādati. So cintesi 'imasmiṃ tñāne amhākam tñāpetvā tñi saraṇāni *aññā* patitṭhā n'atthi?' ti so *tiṇṇam* ratanānam guṇe anussari.

(c) Bodhisatto devavimāṇassadisam ratham abhirūhitvā *uyyānā* bhīmukho agamāsi. Devatā 'Siddhatthakunārassa *abhisambujjanakālo* āsanno, *pubbanimittam dassessimā*' ti ekam devaputtam jarāvajjaram khaṇḍadantaṃ palitakesaṃ *vaṇṇam obhaggasā* iram daṇḍabattam pave dhamānam katvā dassesum.

(d) Carato ca te brahmacariyaṃ agghuttaṃ ca jūhato |  
*Pahūtaṃ* cīyate puñṇam, kiṃ padhānena *kāhasi* ||  
 Duggo maggo padhānāya *dukkaro* durabbhisambhavo |  
 Iva gāthā bhayaṃ Māro atṭhā Buddhassa santike ||

(e) Medavaṇṇam va pāsāṇam vāyaso anupariyagā : |  
 'Ap' *ettha mudum* vindema, api assādanā *siyā* ||  
*Aladdhā* tattha assādaṃ vāyas' etto apakkami |  
 Kāko va selam āsajja nibbiṇṇapema Gotamaṃ ||

(f) 'Nāham bhatako' smi Kussaci nibbiṭṭhena carāmi sabhaloke |  
 Atho *bhatiyā* na vijjati, atha ce patthayasī pavassa deva ||  
 'Atthi vasa, atthi dhenupā, godharaṇico pavenivo ni atthi |  
*Usabho* pi gavampati ca atthi, atha ce *patthayasī* pavassa deva ||

3. (i) Write notes on any four of the following :—

8

*Samudda* (as equivalent to Gaṅgā), *Brahmadatta* (occurring in almost every jātaka), *disākāka*, *kahāpaṇa*, *Samaṇabrahmaṇā*, *tittthiyā*, *Jetavana*, *sakadāgāmi*, *Sāriputta*, and *Māra*

(ii) Give Nāgasena's exposition of the Buddhist view of EITHER *Personality* OR *Rebirth*.

6

(iii) Comment on the italicized forms or expressions in any three of the following and suggest parallels, if any, from the Vernaculars :—

6

- Bhāryam* te kammaṃ ketaṃ.
- Maṇḍana-ātiko puriso attānaṃ *kelāyati mamāyati*.
- Gāyanti naccanti sā *aruṇam utthāpesi*.
- Upāsakassa silagunācāro *matthakam pāpuni*.
- Itthi pi viṭṭhāvā naggā* yassāpi dāsa bhātaro.

## PRAKRIT (BASIC LANGUAGE)

### SEVENTH PAPER

The figures in the margin indicate full marks.

1. Either,

Give the various uses of the word 'Prākṛt', and classify in some detail the Prākṛts of the Middle Indian period. 20

Or,

Give a general account of any two of the Prākṛts—*Mahārāṣṭrī*, *Sauraseni*, *Māgadhi*—under the following heads : general character, geographical centre, affinities, and works in which they are mostly used.



## 2. Attempt either Group A or Group B :—

A.

(a) देवी—देव, अहं पि तुज्झ पडिवद्वाविआ भविस्सं । जघा—

छोछंति दंतरअणाइं गए तुसारे

ईसीसि चंदणरसम्मि मणं कुणंति ।

एण्हं सुवंति घरमज्झिमसालिआसु

पाअंतपुंजिअ पडं मिहुणाइं पेच्छ ॥

(b) विदूषकः—( वलितग्रीवम् ) तुमं पुण तहिं गच्छ जहिं मे मादाए पढमा दंतावली गदा । ईदिसस्स राअउलस्स भद्दं भोदु, जहिं चेडिआ बंभणेण समं समसीसिआए दिसदि । मदिरा पंचगव्वं च एकस्मिं भंडए कीरदि, कच्चं माणिक्कं च समं आहरणे पउंजीअदि ।

(c) राजा—( विहस्य ) पिअवअस्स, कधेमि दे ।

अगं चंगं णिअगुणगणालंकिदं कामिणीणं

पच्छाअंती उण तणुसिरिं भादि णेवच्छळच्छी ।

इत्थं जाणं अवअवगदा कावि सुंदेरमुद्दा

मण्णे ताणं वलइद्धणू णिच्चभिच्चो अणंगो ॥

(i) Reproduce one of the above extracts as literally as you can in English. 5

(ii) Give the alternative forms of तुज्झ and कुणंति in (a) and राअउल 1+1 and कीरदि in (b).

(iii) Account for the case-endings in -रसम्मि in (a), मादाए in (b), and तणुसिरिं in (c). 3

(iv) Point out and explain the देइय words used in any one of the above extracts 3½

(v) Derive ईसीसि in (a), पउंजीअदि in (b), and पच्छाअंती in (c). 1½

B

(a) ता विअममरट्ठपअट्ठावअं तरट्ठेणं, णट्ठावअं मलअमारुदंदोलिद-  
कदाणच्चणीणं, चारुपवचिदपंचमं कलअंठिकंठकंदलेसु, कंदलिदकंदप्पकोदंड-  
दंडखंडिदचंडिमं, सिणिद्धबंधुं वसुंधरापुरंधीए, विसारिअ पसदिप्पमाणे  
अच्छीणि महुच्छवं जहिच्छं पेच्छदु देवी ।

(b) जं मुक्का सवणंतरेण तरला तिक्खा कडक्खच्छडा

सिंगाधिठ्ठिअकेअअग्गिमदळ्ळोणी सरिच्छच्छई ।

तं कप्पूररसेण णं धवळिदो जोण्हाअ णं ण्हाविदो

मुत्ताणं घणरेणुणव्व छुरिदो जादो म्हि एत्थंतरे ॥

- (i) Translate (a), preferably into English or Bengali. 5
- (ii) Explain (b) in your own vernacular. 4
- (iii) Give the vernacular forms of the words used in (b). 4
- (iv) Derive महुच्छव' and जहिच्छ' in (a) and जोषहाअ and एत्थंतरे 2  
in (b).
3. (a) Decline णई and राअ ( राजन् ) in the genitive ( षष्ठी ) and २+१  
इमा in the ablative ( पञ्चमी ).
- (b) Conjugate the root वि+क्री in the present, कृ in the past, 6  
and वच् in the future tenses.
- (c) Turn the following into Sauraseni :— 2
- ऋतुः, भवति, क्रियते, आश्चर्यम् ।
- (d) Give the Māgadhi forms of the following :— 2
- सारसः, हृदयम्, अहम्, कृतम् ।
- (e) Give the Sanskrit equivalents of any four of the following :— 2
- जहिठ्ठिहो, सेज्जा, चोत्थी, फळिहो, हसेव', कसट', तलुनी, करिदाणि,  
पुरिसो, विअ ।

## PERSIAN (BASIC LANGUAGE)

## SEVENTH PAPER

*The figures in the margin indicate full marks*

1. Translate into English any six of the following :— 12

ای احمق لرزه من از خوف نیست  
اسپ فلان شخص در کوچه است  
در دنیا محبت بهترین چیزهاست  
همه برهنه در حوض آب رفتند  
مورچه میان آب نهر در افتاد  
در مملکت ایران رود خانه زیاد نیست  
شیر غضبناک شده از جایی برجست  
همه غوغا بر سر لحاف من بود  
شاه عباس چهل سال با شاهي کرد  
بر سر پل شخصی سیاه دیدم

غلام را حکم بشکستن گوهر کرد  
آنرود خانه در مملکت ایران نیست

2. (a) Select at least five words in Question I that are used in your vernacular, noticing any change they have undergone. 10

(b) State with illustration the rules for the formation of plurals in Persian. 4

(c) How are degrees of comparison formed in Persian? Give examples. 6

3. Give in Persian equivalents of any three of the following :— 6

I came. I have come. He was there. I saw. Bring that book. He ran.

4. Translate into Persian any six of the following :— 21

The village is small. He is a good boy. I came from the city. Where are those horses? I saw a black slave. Six men came. The girl is sick. The night is very dark. Do not go there. The bridge is old. He is a poor man.

## BENGALI

### EIGHTH PAPER

*The questions are of equal value*

*Attempt six questions only*

1. Give the broad outlines of the early history of the Indo-Aryan speech with reference to the origin of Bengali.

2. Discuss the affinities between the Aryan and Dravidian speeches with special reference to Bengali.

3. (a) Explain, as clearly as you can, what you understand by the word 'accent' and its influence and effect on the formation of words, giving some examples from Bengali.

(b) Discuss the derivations of the following words, showing the influence of accent, if any :—

হাউ, ভিসি, পিক, লাউ, and ডুমুর

4. Write a note on the elision of vowels in the middle of words in Bengali showing its cause and tracing it back to OIA. (Old Indo-Aryan).

5. Discuss the Vocalic Glides in OIA. (Old Indo-Aryan), MIA. (Middle Indo-Aryan), and NIA. (New Indo-Aryan) with special reference to Bengali.

6. Discuss historically the phenomena of Assimilation, Vocal Mutation or 'Umlaut', Metathesis, and Haplology in Bengali, giving examples.

7. Write a note on the sources of the following sounds in Bengali :—

খ, ছ, জ, and ণ

8. Discuss historically any two of the following case inflexions in Bengali :—  
Nominative, Instrumental, and Genitive.

9. (a) Write a note on the use of the Passive Voice in OB.(Old Bengali), MB. (Middle Bengali), and NB.(New Bengali), giving examples.

(b) Explain the verbs in the following :—

আমি পাকে, কলসী ভরে, ফল ধরে, দধি বিকেঁ বাইউ মথুরা, বাণী  
চোরায়িতে করিউ বতনে, আমি দেখা বাই, কণাটা ভাল শোনায় না।

10. Write full etymological notes on *eight* of the following words :—

√নার, নহ, রোসো, দেখসে, করগা, সাব্যস্ত, বাসর, মালঞ্চ, নধর,  
আনাজ, নেহারি, শেজ, দেয়াসিনী, ঘর, হুঁটকী, ছোট।

## HINDI

### EIGHTH PAPER

*The questions are of equal value*

*Answer SIX questions only*

1. 'Hindustani (Hindi) is derived from Braj-bhāṣā.'

'Hindustani is developed out of old Panjābī.'

Comment on the two opinions given above, and give your own view about the origin of Hindi.

2. Indicate the various elements of Hindi, explaining clearly the terms *tadbhava*, *tatsama*, *semi-tatsama*, and *desi* in this connexion.

3. Explain the accent-system of Hindi, and give the history of the vowels in initial syllables in Hindi words as derived from Middle Indo-Aryan (Prakrit).

4. Explain and illustrate the working of consonantal assimilation in Middle Indo-Aryan (Prakrit) leading to Hindi.

*Or,*

Discuss the phenomena of cerebralisation, palatalisation, and nasalisation in Middle Indo-Aryan (Prakrit) and Hindi, quoting suitable words from Hindi with Prakrit sources.

5. Give the history of the noun declension of Hindi (*Khari Boli*), noting the origin of the oblique forms and of the more common post-positions.

6. Discuss historically the formation of the past tense in Hindi.

7. Classify the tenses of Hindi, simple and compound, indicating their origin.

8. Explain the formation of *eight* of the following Hindi words :—

है ; होवे ; था ; गया ; किया ; Braj कीनौ ; बैठना ; गोरू ;  
गाय ; गोड़ ; चार ; सौ ; तिरिया ; रसोई ; इन्दारा ; पनसारी ; पछना ;  
दौड़ना ; मुस ; कौन ।

9. Enumerate the various 'dialects' of Hindi (i.e. those speeches of which the speakers have adopted Hindi as their literary language), and indicate, preferably by means of a genealogical table, their relationship with each other and with Hindi.

## ORIYA

## EIGHTH PAPER

*The questions are of equal value. Answer six questions only.*

*Write your answers in English*

1. Indicate the main lines of the history of Oriya as a New or Modern Indo-Aryan language from Old Indo-Aryan (Vedic). Quote words and forms in illustration of your answer.

2. How is Oriya related to Hindi, Marathi, Panjabi, Gujarati, Bengali, Maithili, and Assamese? Indicate particularly the points of agreement and disagreement between Oriya and its immediate sisters and cousins.

3. What are the various elements in the vocabulary of Oriya? How is it that the same Sanskrit word occurs in more than one modified form in Oriya?

4. Write a note on the accent system of Oriya, showing how it interferes with the development of the Oriya vowels.

5. (a) How is the 'r' (ॠ) of Old Indo-Aryan (Vedic) represented in Oriya words derived from Middle Indo-Aryan (Prakrit)? Give examples.

(b) Write a note on the origin of the cerebral i (ॠ) in Oriya words derived from Prakrit or borrowed from Sanskrit. How is it that we have ॠ in *tela* and ॠ in *taila*?

6. Write a historical note on the formation of the plural in the declension of the Oriya noun, and on that of the genitive case.

7. Explain the origin of the forms for the Oriya pronoun of the first and second persons, giving Old and Middle Indo-Aryan (Sanskrit and Prakrit) source-forms.

8. Classify the tenses of the Oriya verb, comparing them with those of English. Indicate also their origin.

9. Discuss the influence of neighbouring speeches on Oriya.

10. Write philological notes on eight of the following Oriya words:—

o (ଓ); *Oriyā* (ଓଡ଼ିଆ); *ihā* (ଆଜ); *kalā* (କାଳ); *kaunāsī* (କୌଣସି); *keteka* (କେତେକ); *dhailā* (ଧାଇଲା); *khurūtā* (ଖୁରୁତା); *naūri* (ନଉରି); *ṣoḷa* (ଷୋଳ); *maraka* (ମରକ); *āmbilā* (ଆମିଳା); *māṇṣa* (ମାଂସ); *bhainī* (ଭାଇଣୀ); *ākhu* (ଆଖୁ); *pokharī* (ପୋଖରୀ); *pua* (ପୁଅ); *māilā* (ମାଇଲା); *paṛosī* (ପଡ଼ୋସୀ); *harirā* (ହରିଡ଼ା); *aiihā* (ଆଇଁଠା); *bhāṇja* (ଭାଞ୍ଜ); *bisoī* (ବିଶୋଇ); *bhoka* (ଭୋକ); *bāṇṇī* (ବାଞ୍ଛା); *pālāṣa* (ପାଲଟ); *huanti* (ହୁହୁଟି).

## URDU

## EIGHTH PAPER

*The questions are of equal value*

*Answer ANY SIX questions*

1. Discuss the question of transliterating from Hindi into Urdu and *vice versa*. Can you formulate a systematic scheme for this?

2. What are the main varieties of Urdu to-day? Which would you regard as the 'standard' variety? Give reasons.

3. How far has English influenced Urdu as a language? Discuss with reference to *words* and to the *syntax*.

4. (i) 'Hindustani (Hindi or Urdu) is derived from Brāj-bhāṣā.'

(ii) 'Hindustani is developed out of the old Panjabi.'

(iii) بعضوں کا گمان یہ ہے کہ ہم اہل زبان ہین

دلی نہیں دیکھی ہے، زبان دان یہ کہاں ہین؟

Comment on the three opinions given above, and give your own view about the origin of Hindustani (Urdu).

5. Indicate the various elements in the vocabulary of Urdu, explaining clearly the terms *tadbhava*, *tatsama*, *semi-tatsama*, and *desi* in this connexion.

6. Explain the accent system of Urdu, and give the history of the vowels in initial syllables in Urdu words as derived from Middle Indo-Aryan (Prakrit).

7. Explain and illustrate the working of consonantal assimilation in Middle Indo-Aryan (Prakrit) leading to Urdu.

Or,

Discuss the phenomena of cerebralisation, palatalisation, and nasalisation in Middle Indo Aryan (Prakrit) and Urdu, quoting suitable words from Urdu with Prakrit sources.

8. Give the history of the noun declension of Urdu, noting the origin of the oblique forms and of the more common post-positions.

Or,

Discuss historically the question of gender in Urdu. How are Persian and Arabic loan-words treated in this respect?

9. Discuss historically the formation of the past tense in Urdu.

10. Classify the tenses of Urdu, simple and compound, mentioning their origin.

11. Explain the formation of *eight* of the following words of Urdu:—

پنساری ; سر ; چار ; بیٹھنا ; کیا ; گیا ; تھا ; ہوئے ; ہین

مجھہ ; کوتوالی ; درزنا ; کون ; پلنٹا ; دیول ; سچ ; ارنٹ

کس as in کس.

12. Write a general note on the influence of Persian and Arabic grammar on Urdu grammar.

## HISTORY

## INTERNAL EXAMINERS

- DR. SURENDRANATH SEN, M.A., B.LITT., PH.D.  
 MR. INDUBHUSHAN BANERJEE, M.A.  
 DR. NARAYANCHANDRA BANERJEE, M.A., PH.D.  
 „ HEMCHANDRA RAYCHAUDHURI, M.A., PH.D.  
 „ UPENDRANATH GHOSHAL, M.A., PH.D.  
 MR. SATISCHANDRA CHAKRABARTI, M.A.  
 „ TRIPURARI CHAKRABARTI, M.A.  
 „ SUBIMALCHANDRA DATTA, M.A.  
 DR. A. P. DASGUPTA, M.A., PH.D.  
 MR. PRAMATHANATH BANERJEE, M.A., B.L., BARRISTER-AT-LAW.  
 PROF. M. Z. SIDDIQI, M.A., PH.D.  
 MR. A. F. M. ABDUL KADIR, M.A.  
 „ NARENDRAKRISHNA SINHA, M.A.

## EXTERNAL EXAMINERS

- DR. KALIKARANJAN QANUNGO, M.A., PH.D.  
 PROF. ARTHUR BROWN, M.A., LL.B.  
 MR. TEJA SINGH, M.A.  
 „ Y. J. TARAPOREWALA, M.A.  
 „ G. S. SARDESAI, B.A.  
 DR. RAMESCHANDRA MAJUMDAR, M.A., PH.D.  
 „ JITENDRAPRASAD NIYOGI, M.A., PH.D.  
 MR. R. B. RAMSBOTHAM, M.B.E., M.A., B.LITT.  
 „ SUSOBHANCHANDRA SARKAR, M.A.  
 „ K. ZACHARIA.  
 „ D. V. APTE.  
 „ KRISHNADHAN BANERJEE, M.A.  
 PROF. D. R. BHANDARKAR, M.A., PH.D.  
 MR. P. C. MUKHERJEE.

## FIRST PAPER

*The questions are of equal value*

*Answer ANY THREE questions from EACH of the two halves*

## FIRST HALF

1. Indicate Robert Owen's place in the History of English socialism.
2. In what sense were Canning and Huskisson forerunners of Peel and Gladstone?
3. Discuss the part played by the Duke of Wellington in the sphere of politics.
4. How did Peel reorganize the Tory party after the shock it received in 1832?
5. 'Durham saved Canada and the Empire.' Explain.

## SECOND HALF

*Examiner*—DR. A. P. DASGUPTA, M.A., PH.D.

6. What do you know of the controversy waged in the 'forties' of the 19th century over the fiscal policy of England?
7. Give a critical account of English policy in South Africa from 1877-1884.
8. The Treaty of Berlin (1878) was an 'outstanding monument of Disraeli's masterful personality in politics.' Do you agree?
9. Comment on or criticize :—  
'We ought to have conquered the Irish and then given them Home Rule.'
10. What part did the fourth party play in shaping Tory policy? Account for the rise and fall of Lord Randolph Churchill.

## SECOND PAPER

*The questions are of equal value*

*Only THREE questions to be attempted from EACH half*

*Examiners*—{ DR. H. C. RAYCHAUDHURI, M.A., PH.D.  
,, RAMESHANDRA MAJUMDAR, M.A., PH.D.

## FIRST HALF

1. Sketch the main political divisions of India shortly before the rise of Buddhism. What are the most interesting factors in the politics of the sixth century B.C.?
2. Examine critically the account of the rise of Chandragupta as given by Justin. What light does this account throw on the date of his accession?
3. Comment on the following passages :—  
(a) King Priyadarśin, Beloved of the gods, honours (men of) all sects and honours (them) with gift and manifold honour.  
(b) Thereafter, now, when the country of Kalinga has been acquired, the Beloved of the gods has zealous compliance with Dhamma, love for Dhamma, and teaching of Dhamma.
4. What circumstances, religious and political, lend interest to the reigns of (a) Menander, (b) Gondopernes, (c) Kadphises II, and (d) Kanishka?
5. 'The Gupta dominion is famous for that unparalleled blossoming of the literary genius of India which has justly earned for this epoch the title of the Golden Age of Sanskrit literature.' Elucidate. Discuss, in this connection, the identity of King Vikramāditya of Ujjain famed in Hindu tradition.
6. Give an account of the first three Pāla sovereigns with special reference, wherever possible, to their relations with the contemporary rulers of Kanauj and the Deccan.
7. Describe the Chalukya-Pallava contest for primacy in Southern India.

## SECOND HALF

8. Discuss the Hindu theories regarding the origin of kingship. What were the checks on the arbitrary authority of a king in Ancient India?
9. Describe the constitution and functions of the Mauryan Council of Ministers. Refer to the sources of your information.



10. Write short notes on any four of the following :—

- (a) Municipal Boards of Maurya India.
- (b) Sannidhātṛi and Samāhartṛi.
- (c) Nāvadhyaksha.
- (d) Sixfold policy.
- (e) Episkopoi.
- (f) Dvairāja.

11. Give a brief account of the administration of Chandragupta II Vikramāditya from the data supplied by Fa Hien and inscriptions.

12. Strabo quotes Megasthenes as saying that none of the Indians employed slaves. Discuss the credibility of the information given by the Greek ambassador.

13. What does Megasthenes say about the social divisions of Ancient India? How does his account compare with that of Indian writers like Kautilya and the author of the *Mānava-dharma-śāstra*?

14. Write a note on the commercial activities of the ancient Indians, with special reference to (a) the principal ports, (b) main trade-routes, and (c) chief articles of trade.

### THIRD PAPER

Examiners—{ MR. INDUBHUSHAN BANERJEE, M.A.  
 „ P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.

*The questions are of equal value*

### FIRST HALF

*THREE questions to be attempted*

1. Comment on any three of the following :—

- (a) 'Twice joyful are the gods for thou hast established their offerings.  
 Twice joyful are thy princes; thou hast formed their boundaries.  
 Twice joyful is Egypt at thy strong arm; thou hast guarded the ancient order.'
- (b) 'Once at the sight of an Egyptian the kings of Canaan fled from before him, but now, the sons of Abd-Ashirta despise the people of Egypt and threaten me with their bloody weapons.'
- (c) 'What have I done unto my lord the king? Men slander me before my lord the king, (saying) "Abd-Khiba has fallen away from his lord the king." See, as for me, neither my father nor my mother have set me in this place; the mighty arm of the king hath caused me to enter into the house of my father.'
- (d) 'To the kings of Canaan, vassals of my brother, the Great King. Verily, Akia, my messenger, to the King of Egypt, my brother, in order to condole with him, have I sent. Let none detain him and let no violence be done him.'

2. Discuss the main arguments on which the broad framework of Egyptian chronology has been built up. Why is the year 4241 B.C. regarded as the earliest definite date in Egyptian history?

3. 'We meet, in the mind of Amenemhet, for the first time, the conception of single-minded public duty, and the obligation of the king to benefit his subjects, which became the tradition of his descendants.'

Explain and illustrate.

4. Does a comparison between Thutmose III and Ramses II show that the national character of the Egyptians had progressively declined?

5. 'The renovation of Egypt under the rule of the Saites produced no real renaissance. The archaism was but a fashion and meant nothing.'

\* Examine.

6. Discuss the following :—

- (a) The relation of ethics to religion in the Middle Kingdom.
- (b) Naturalism in art during the days of Ikhnaton.

## SECOND HALF

*Candidates are permitted to answer THREE questions only*

1. Comment on *any two* of the following :—

- (a) 'Abraham came into conflict with Amraphael, king of Shinar; Arioch, king of Ellasar; Chedorlaomer, king of Elam; and Tidal, king of Goiyyum.'
- (b) 'Behold upon the mountains the feet of him that bringeth good tidings that publisheth peace! O Judah keep thy solemn feasts, perform thy vows, for the wicked shall no more pass through thee: he is utterly cut off.....Woe to the bloody city.'
- (c) Oh servant, hearken unto me  
Yes, my lord, yes  
Now then what is the good?  
To break my neck and thy neck  
To fall into the river is good  
Who is long enough to ascend unto heaven?  
Who is vast enough to complete the earth?  
Nay, oh servant, I will slay thee and cause thee to go before me.

2. Draw a sketch map to illustrate the extent of the Assyrian empire at its height.

3. Does the story of Gilgamesh throw light on the immortality of the soul? From your study of the code of Hammurabi illustrate the status of the wife in Babylonia.

4. Discuss our chief sources of knowledge for the reigns of (i) Tiglath-pileser IV, (ii) Sargon II.

*Or,*

Give a brief account of the Imperial constitution of Persia. How far was it an advance on (i) the Assyrian system, (ii) the Egyptian system?

5. 'Sennacherib was restless and erratic in his military movements and in his policy. His campaigns were often planned and his victories achieved in defiance of strategical considerations.' (Hall.) 'Sennacherib must be accounted a cautious ruler, the best administrator that Assyrian records tell of.' (Camb. Anc. Hist.) Discuss.

6. Write a connected account of Urartu. Account for her failure to establish an empire in Asia.

*Or,*

Illustrate Esarhaddon's policy towards (i) Elam, (ii) Egypt, (iii) Babylon.

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

**Examiner—MR. K. ZACHARIAH, M.A. (OXON.), I.E.S.***Answer ANY THREE questions*

1. Comment on any four of the following passages :—

(a) Of the acknowledged customs and dignities of the realm a certain part is contained in the present document, of which part these are the chapters.  
(*Constitutions of Clarendon.*)

(b) Let all burghers and the whole body of freeman have a doublet of mail and a headpiece of iron and a lance.  
(*Assize of Arms.*)

(c) The common pleas shall not follow our court, but shall be held in some certain place.  
(*Magna Carta*)

(d) The fine of murder from henceforth.....shall hold place on those slain feloniously, and not otherwise.  
(*Provisions of Westminster.*)

(e) It is accorded that a Parliament shall be holden every year once, and more often if need be.  
(*Statute of 1330.*)

(f) No tallage or aid shall be levied.....without the goodwill and assent of the archbishops, bishops, earls, barons, knights, burgesses, and other freemen of our realm.  
(*De Tallagio Non Concedendo.*)

(g) That no duke, earl, baron, or banneret give such livery of company to knight or esquire, if he be not retained with him for the term of his life for peace and for war, by indenture.  
(*Statute of 1390.*)

(h) The king wills.....that the judgment rendered against Thomas Haxey.....be wholly annulled.  
(1399.)

2. In what respects did the English feudal organization of 1086 (Domesday Book) differ from that of 1215 (Magna Carta)?

3. Describe the evolution of the Curia Regis up to the end of Edward I's reign.

4. Explain the nature of the problems that faced the baronial opposition in the reign of Henry III, and show how they attempted to solve them.

5. In what respects was there any development in the form and powers of Parliament in the 14th century?

6. Sketch the history of the chief offices of state in the Middle Ages.

7. Trace the rise and decline of the neo-feudalism of the 15th century, and point out its constitutional results.

8. Summarize generally the materials for the study of English constitutional history from 1066 to 1399, and illustrate their value.

## SECOND HALF

**Examiner—MR. TRIPURARI CHAKRABARTI, M.A.***Answer ANY THREE questions*

1. Comment on any four of the following passages :—

(a) Whatsoever offense or injury is offered to the meanest member of house (of Commons) is to be judged as done against our person, and the whole court of Parliament.  
(*Speech of Henry VIII in Ferrers' Case, 1543.*)

(b) Some should be presently repealed, some suspended, and none put into execution but such as should first have a trial according to the law for the good of the people. (*Elizabeth's Message with regard to Monopolies, 25 November, 1601.*)

(c) The king by his proclamation cannot create any offence which was not an offence before. (*The Case of Proclamations*, 1610.)

(d) But as for Tonnage and Poundage, it is a thing I cannot want, and was never intended by you to ask, nor meant—I am sure—by me to grant. (*The King's Speech proroguing Parliament*, June 26, 1628.)

(e) We are also of opinion, that in such case your Majesty is the sole judge both of the danger, and when and how the same is to be prevented and avoided. (*The Answer of the Judges in the matter of Ship-money*, February 7, 1637.)

(f) If you find him guilty, and say what he is guilty of, we will judge whether the thing imports malice or not. (*Chief Justice Scroggs in Henry Carr's Case*, 1680.)

(g) And with respect to the argument of State necessity, or a distinction which has been aimed at between State offences and others, the common law does not understand that kind of reasoning, nor do our books take notice of any such distinctions. (*Camden, C. J., in Entick v. Carrington*, 1765.)

(h) Having convinced myself that mere order of the House will not justify an act otherwise illegal, and that the simple declaration that the order is made in exercise of a privilege does not prove the privilege,.....(*Denman, C. J., in Stockdale v. Hansard*.)

2. Discuss the influence of the Crown upon Parliament during the Tudor Period.

3. Examine the part played by the Writ of Habeas Corpus in the constitutional conflicts of the 16th and 17th centuries.

4. Discuss the legality and historical correctness of the fiscal claims of the Crown during the reigns of James I and Charles I.

5. How far is it true to call Charles II 'a Constitutional monarch'?

6. Describe, in detail, the effects on the constitution of the supremacy of the Whig Party from 1689 to 1760.

7. Trace the development of the doctrine of 'Collective responsibility' in the Cabinet from 1784 to the present day.

8. How is the right to the free expression of opinion safeguarded in England? Illustrate the importance of the part played by judicial decisions in securing this right.

#### FIFTH PAPER

Examiners—{MR. SATISCHANDRA CHAKRABARTI, M.A.  
DR. NARAYANCHANDRA BANERJEE, M.A., PH.D.

*The questions are of equal value*

*Answer ANY THREE questions from EACH half*

#### FIRST HALF

1. What are the sources of modern International Law? Examine the influence of the doctrine of sovereignty upon the development of International Law.

2. Discuss the rules of International Law relating to 'territorial seas.' To what extent are those rules applicable to straits?

3. Critically examine, with special reference to the present Sino-Japanese conflict, the various articles of the covenant of the 'League of Nations' relating to the prevention of war.

4. Discuss, by reference to illustrative cases, the existing law as to the capture of private property on land in times of war.

5. Discuss the principles laid down in *any two* of the following cases :—

- (1) The *Virginius*.
- (2) The *Lotus*.
- (3) The *Indian Chief*.
- (4) The *Appam*.
- (5) The *Kirin*.

## SECOND HALF

1. Define war and discuss the efforts for abolishing war altogether. Will these be successful?

2. What are the essentials of a legally binding blockade? Discuss with special reference to the practice of belligerent parties during the great war.

3. Discuss the doctrine of 'continuous voyage.' What extension did the doctrine receive during the last great war?

4. Give a short history of 'Neutrality,' and discuss the duties of neutral States.

5. Write critical notes on *any three* of the following :—

- (a) Different classes of contraband.
- (b) The political status of the Papacy.
- (c) The position of mandated territories.
- (d) Unneutral service.
- (e) Recognition of belligerency

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(BENGAL)

## SIXTH PAPER

Examiners—{ INDUBHUSHAN BANERJEE, M.A.  
PARESCHANDRA MUKHERJEE.

*The questions are of equal value*

*Six questions in all to be attempted, THREE from EACH half*

## FIRST HALF

1. Give an account of the Company's military resources in Bengal during the period of the battle of Plassey. Estimate, in this connection, the services rendered by naval power in the consolidation of the Company's position in Bengal.

2. Compare and contrast Mir Jafar and Mir Kashim. How far will it be correct to say that the failure of the former was due to circumstances over which he had no control and of the latter to unfair and provocative treatment received at the hands of the English?

3. 'I was determined to do my duty to the public, although I should incur the odium of the whole settlement. The welfare of the Company required a vigorous exertion, and I took the resolution of cleansing the Augean stable.'

(Clive.)

Explain in reference to the second administration of Lord Clive.

4. 'Though the assumption of the Dewani is important as marking the formal recognition of the position of the English in Bengal, it left that position still very anomalous'. Examine.

5. Write a critical review of the Rohilla policy of Warren Hastings. To what extent has the Burke-Mill view been shaken by Forrest's State papers?

## SECOND HALF

6. Indicate the main stages in the transition of the sovereign power in Bengal from the Nawab to the Company.

7. To what extent were the defects of the Regulating Act remedied by Pitt's India Act of 1784?

8. How far was Burke correct in his assertion that the Benares policy of Warren Hastings was the result of private malice and corruption?

9. Discuss the merits of the administration of Warren Hastings, with special reference to the benefits it conferred on the people.

10. Critically discuss any two of the following :—

(a) Nandakumar's petition for mercy.

(b) Impey's appointment to the office of the Chief Judge of the Sadar Dewani Adalat.

(c) Dispute between Clavering and Hastings regarding the latter's resignation.

(d) The Patna Case.

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

Examiner—DR. A. P. DASGUPTA, M.A., PH.D.

*Answer ANY THREE questions*

1. Describe the circumstances that led to the appointment of 'Supravisors' in 1769. What were the terms of their instruction? Do you consider the experiment a failure?

2. Examine the main points at issue in the discussion in the Bengal Council between Warren Hastings and Philip Francis on land revenue problems.

3. Write a note on the office of the Kanungo.

4. Discuss the revenue and judicial changes recommended by the Committee of Circuit in 1772.

5. Point out the stages by which Warren Hastings and Cornwallis gradually extended the control of the Company over the administration of criminal justice in Bengal.

## SECOND HALF

Examiner—DR. J. P. NIYOGI, M.A., PH.D.

*Answer ANY THREE questions*

1. Discuss the various methods by which the East India Company provided for its 'investment.'

2. Describe the effect of the famine of 1770 on the economic life of Bengal.

3. 'It is by the persistence and earnestness of his efforts and not by the extent of his success that we should judge Warren Hastings.'

In the light of this remark estimate the importance of the economic reforms carried out by Warren Hastings.

4. Give an idea of the working of the salt monopoly in Bengal from 1765 to 1780.

5. Trace the history of the Bengal cotton industry in the 18th century.

## (RAJPUTS)

## SIXTH PAPER

Examiners—{PROF. D. R. BHANDARKAR, M.A., PH.D.  
 {DR. N. C. BANERJEE, M.A., PH.D.

*The questions are of equal value*

## FIRST HALF

*Answer only THREE questions*

1. Explain the Agnikula legend, and show what light modern research throws upon it.
2. Describe briefly the struggle for supremacy between the Rajputs and the Mussalmans up till A. D. 1191.
3. What is the popular view about the origin of the Guhilots? What do we know about it now from a critical study of epigraphic and other historical records?
4. Describe the part played by Lakshmi-Karna and Kirtivarman Chandel in the political history of the 11th century.
5. Which are the Rathod States at present obtaining in Rajputana? Show briefly how each came to be established originally at its present capital town.

## SECOND HALF

*Answer only THREE questions*

1. Give a short sketch of the Chaulukyas of Gujarat, with special reference to their origin and the achievements of the great rulers of the line.
2. Give an account of the Paramāras of Dhārā up to the death of the great Bhoja.

*Or,*

Sketch the career of Gāṅgeyadeva.

3. Discuss the administrative system of the Rajput States of the period, and account for the growth of a feudal system in the Rajput States.

4. Discuss—

'With all their patriotism and their martial ardour, the Rajputs failed to build lasting empires while their rivalry ruined the country.'

5. Write critical notes on any three of the following :—

- (a) Turnśka-dapḍa.
  - (b) The rights and duties of vassal Rajput princes.
  - (c) Bhoja's patronage of learning.
  - (d) Dynastic quarrels in Rajput States.
  - (e) The Kacchapaghātas of Gwalior.
  - (f) The Ratnapur branch of the Chedi dynasty.
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## SEVENTH PAPER

Examiners—{MR. SUBIMALCHANDRA DATTA, M.A.  
DR. H. C. RAYCHAUDHURI, M.A., PH.D.

*The questions are of equal value*

*Attempt THREE questions only from EACH half*

## FIRST HALF

1. Discuss the epigraphic evidence regarding (a) the antiquity of the Guhila kingdom of Mevād, and (b) the identity of Śrī Bappaka Kshītipati.
2. Give a critical account of the reign of Mokala from the data of the inscriptions.
3. Institute a comparison between Rāṇā Kumbhakarna and Samgrāma Simha as soldiers and statesmen. Refer to the sources of your information.
4. Give a brief account of the struggle between Rāṇā Amara Simha and the Emperor Jahāngir. How far is Sir Thomas Roe justified in saying that 'The Rāṇā was rather bought than wonne.'
5. Write short notes on any four of the following :—
  - (a) Aṭpur Inscription of the Guhila Śaktikumāra.
  - (b) The usurpation of Vanavīra with special reference to numismatic evidence.
  - (c) Udā the parricide.
  - (d) Contemporary evidence regarding the battle of Haldighātī.
  - (e) The historicity of the episode of the 'Princes of Roopnagurrh' and her relations with Rāṇā Rā'simha.
  - (f) The relations of Mewar with Jaipur and Jodhpur in the days of Bhīm Simha II.

## SECOND HALF

6. Discuss the importance of the Bīṭhū inscription of Sīhā Rāṭhoḍ.
7. Give a clear account of the life and achievements of Rāv Chūṇḍā. How do you account for his success?
8. Discuss the nature of Rāṭhoḍ kingship, with special reference to (a) rules of succession, and (b) the king's relations with the nobles and with the paramount power in the 16th and 17th centuries.
9. To what extent can the history of the Rajputs in the 18th century be characterized as a contest for primacy between the Kachhwāh and the Rāṭhoḍ?
10. Give a clear idea of the political situation in Marwar which led up to the treaty with the E. I. Company.

(SIKHS)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

Examiner—MR. TEJA SINGH, M.A.

*Answer ANY THREE questions*

1. Discuss the authenticity of Bhai Bala's *Janamsakhi* as a piece of historical material, and bring out the reliability or otherwise of the *Janamsakhi* presented by H. P. Colebrook to the India Office library.



2. Write a note on the importance acquired by *Jogis* in Northern India by the beginning of the sixteenth century, and the controversies they had with Guru Nanak.

3. Sikhism 'stands distinguished from other reform movements by two important peculiarities, its non-sectarian character and its reconciliation with secular life.' (*Narang.*)

What was the effect produced by these tendencies on the political, social and industrial life of the nation?

4. Discuss the following statement with reference to the times of the first six Gurus :—

'The genius of the Gurus who built the Sikh Church and that of the Kings, who built the vast fabric of the Mogul Empire, worked in many respects on parallel lines.'

5. Write historical notes on:—

(a) 'They come in '78 and shall depart in '97 and then shall arise another brave man.' (*Guru Nanak*)

(b) 'The order of the Merciful has gone forth that now no one shall molest another.' (*Guru Arjun.*)

(c) 'If you want to get freedom in eating and drinking, you may better join Sikhism, where there is no restriction about food.' (*Dabistan.*)

## SECOND HALF

Examiner—MR. INDUBHUSHAN BANERJEE, M.A.

THREE questions to be attempted

1. Explain the circumstances that led to the disintegration of Sikhism after the death of Guru Hargovind. To what extent did Guru Govind Singh succeed in removing the difficulties?

2. How would you reconcile the *Devi-puja* episode with the general trend of Guru Govind Singh's teachings and career?

3. How does the Guru explain the mission of his life in the *Vichitra Natak*? To what extent was that mission actually realized?

4. Discuss any two of the following:—

(a) The charges of the author of the *Seir-ul-Mutaqherin* against Guru Tegh Bahadur.

(b) The causes of the battle of Bhangani.

(c) Banda's relations with the Khalsa.

5. Comment on any three of the following :—

(a) 'Then Ram Das *Sodhi* became Guru. Amar Das gave him the Guruship according to the ancient blessing.'

(b) 'After Har Krishan came Tegh Bahadur, who protected the frontal marks and sacrificial threads of the Hindus.'

(c) 'All who call me the Supreme Being shall fall into the pit of hell.'

(d) 'The Guru is the Khalsa and the Khalsa is the Guru, there is no difference between them.'

## SEVENTH PAPER

Examiners—{MR. NARENDRAKRISHNA SINHA, M.A.  
 ,, INDUBHUSHAN BANERJEE, M.A.

*The questions are of equal value*

Six questions in all to be attempted, THREE from EACH half

## FIRST HALF

1. Account for the failure of Ahmad Shah, Taimur Shah, and Zeman Shah to cope with the Sikhs. Explain the significance of Ahmad Shah's policy of conciliation in his relations with the house of Patiala.

2. Describe the features of the Sikh *misls* system under the following heads :—

- (a) How the *misls* originated.
- (b) Constitution, if any.
- (c) Land tenure and justice.
- (d) Military organization.

3. Write a short history of the Kanheya *misls*. Describe Sada Kowe's relations with Ranjit Singh, and comment on the statement: 'Howsoever humanity may plead in her behalf one does not see how she could well be treated otherwise, being what she is and has been.'

4. Narrate the history of the gradual absorption of the Trans-Sutlej *misls* by Ranjit Singh. What were the reasons for the failure of the Bhangis and the success of the Sukerchukia chieftain?

5. Describe the relations of the Phulkian chiefs with the Marathas, the British, and Ranjit Singh up to 1804. Was the British Government justified in its assertion, 'By the issue of a war with the Marathas the British Government became possessed of the power and right formerly possessed by that nation in the north of Hindusthan?'

## SECOND HALF

1. Give a brief history of Ranjit Singh's relations with Dost Muhammad. What is the exact significance of the battle of Jamrud in Sikh-Afghan relations?

2. Write a critical or explanatory note on the following statement about Sikh Government under Ranjit Singh: 'As a military despotism the Government is a mild one, as a federal union hastily patched up into a monarchy it is strong and efficient.' (Laurence.)

3. Describe the organization and strength of Ranjit Singh's regular army in all its branches. Compare the Sikh army as organized by Ranjit Singh with the westernized Maratha army.

4. 'The iniquity of the transaction was shrouded by the smoke of battle.' Examine this statement of Bell about the annexation of the Punjab.

5. Write notes on any four :—

- Rakhi (protection money).
- Battle of Hydaru.
- Syed Ahmed Shah.
- Fakir Azizuddin.
- Battle of Sohraon.
- Sansar Chand.

## (MARATHAS)

## SIXTH PAPER

Examiners—{PROF. SURENDRANATH SEN, M.A., PH.D., B.LITT.  
MR. G. S. SARDESAI, B.A.

*The questions are of equal value*

*Attempt SIX questions in all : THREE from EACH half*

## FIRST HALF

1. To what extent, if at all, was Shivaji indebted to Ramdas for his political ideals?
2. Did Shivaji contemplate the conquest of Northern India? If so, what evidence can you adduce in favour of your statement?
3. What was the constitution of the Maratha kingdom as conceived by Shivaji, and what changes did it undergo after his death?
4. How far was Shivaji responsible for his father's arrest and imprisonment by the Sultan of Bijapur? Did he take any step to secure Shahaji's release?
5. Shortly review Shivaji's naval policy.

## SECOND HALF

6. What was Shivaji's object in his first sack of Surat? Describe the event, and show how far he gained his end.
7. To what extent was Annaji Datto responsible for the political disunion among the Marathas after Shivaji's death?
8. Explain the constitutional position of Rajaram after Shahu's imprisonment. Did he claim the Maratha throne for himself and his heirs?
9. Institute a comparison between Shantaji Ghorpade and Dhanaji Jadhav as patriots and military leaders.
10. Enumerate the causes of Aurangzib's failure in the Deccan.

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

Examiner—MR. D.V. APTE

*Answer ANY THREE questions*

1. Describe the state of affairs in the Deccan which Shahu's advisers had to face at the time of his accession.
2. Sketch the career of Kanhoji Angria, pointing out the significance of his naval activities, and also discuss his relations with the central power at Satara and his dealings with the English.
3. Explain critically the circumstances, immediately preceding and following Shahu's demise, that transferred the supreme power of the Maratha State to Balaji Bajirao Peshwa.
4. Briefly refer to the main incidents, and discuss the policy involved, that led to the expansion of the Maratha Empire from Malva to Attock.
5. Dilate, at length, upon any two of the following :—
  - (1) The rise of the Peshwas seriously affected the constitution of the Maratha State.
  - (2) The Maratha plunderer is absent in the Maratha administrator.
  - (3) In the Maratha army a career was open to every man of ability.
  - (4) Huzur Daftar or the Imperial Secretariat of the Peshwas was a very carefully organized establishment.

## SECOND HALF

*Examiner*—MR. TRIPURARI CHAKRABARTI, M.A.

*Answer ANY THREE questions*

1. Write a short note on Maratha incursions into Bengal, Bihar and Orissa in the 18th century. To what causes would you attribute the failure of the Marathas to conquer Bengal?

2. Describe the successive steps by which the Marathas extended their influence into Rajputana. How would you characterize the Maratha policy towards the Rajputs from the days of Baji Rao I to those of Mahadji Scindia?

Discuss the nature of the relations of the Marathas with the Court of Delhi from 1772 to 1803.

4. Institute a comparison between Nana Fadnis and Mahadji Scindia as patriots and statesmen.

5. To what extent did the personal defects of Baji Rao Raghunath contribute to the downfall of the Maratha Empire?

6. How far were the Maratha Village Communities during the Peshwa Period autonomous and democratic in their constitution?

## (HISTORY OF ISLAM)

## SIXTH PAPER

*Examiners*—{MR. A. F. M. ABDUL KADIR, M.A.  
PROF. M. Z. SIDDIQI, M.A., PH.D.

*The questions are of equal value*

*Answer ANY THREE questions from EACH half*

## FIRST HALF

1. Describe briefly the character of the prophet of Islam, and discuss the chief causes of his success.

2. 'During the thirty years that the republic lasted, the policy derived its character chiefly from Umar, both during his life-time and after his death.' Discuss fully.

3. Describe briefly and discuss fully the causes of the fall of the Umayyads.

4. Estimate the contribution made by either Umar II, or Walid b. Abdul-Malik to the history of Islam.

5. Write short historical notes on any three of the following :—

(1) Khalid b. Walid, (2) Tarik b. Ziyad, (3) Musa b. Nusayr, (4) Muhallab b. Abi Sufra.

## SECOND HALF

1. How do you account for the easy conquest of Spain by the Arabs? Explain fully.

2. Give an account of the services of Abdur-Rahman III to the Umayyad power in Spain

3. 'It was Al-Mansur that really founded the Abbasid Empire.'  
(*Al-Fakhri*.)

Discuss and comment.

4. Give an account of the literary and scientific activities of the Muslims during the reign of Al-Mamun.

5. Give a brief sketch of the rise and fall of the Fatimid dynasty in Egypt.

## SEVENTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiner*—MR. K. D. BANERJEE, M.A.*THREE questions only are to be answered*

1. 'The temples shall be unto us, like as the churches of the Christians, the synagogues of the Jews, and the fire temples of the Magians.' Discuss this statement of Muhammad, son of Kasim. 16½
2. 'It is only in a limited sense that Mahimud can be described as an Indian sovereign.' Discuss and illustrate your answer with a sketch map of his empire. 16½
3. 'Qutbud Din Aibak was the real founder of the Muslim empire in India.' Give reasons for this view. 16½
4. 'Alaud-din framed a special code of laws against the Hindus.' Give an account of these laws and offer a reasoned criticism. 16½
5. 'Timur inflicted on India more misery than had ever before been inflicted by any conqueror in a single invasion.' Give an account of his career to justify this point of view. 16½

## SECOND HALF

*Examiner*—DR. KALIKARANJAN KANUNGO, M.A., PH.D.*The questions are of equal value**Attempt ANY THREE questions*

1. Give in some detail the history of Bengal from 1526 to 1556 A.D., with particular notice to its relations with the Delhi empire during this period.
2. Give a critical estimate of *Tuzuk-i-Jahangiri* as a source of the history of Jahangir's reign. What light does it throw on the patronage of letters and Fine Art at the Mughal Court?
3. Compare and contrast the condition of the Indian masses in the 16th century with that of theirs in the present age. Quote facts in support of your own view.
4. How far was the personal incapacity of the Later Mughals responsible for the decline and fall of the Mughal empire? Illustrate your answer by short character sketches of Bahadur Shah I, Jahandar Shah, and Muhammad Shah.
5. What were the cardinal features of the Agrarian system in Mughal India? Were they materially affected by the orthodoxy of Aurangzib?

## (COMPARATIVE POLITICS)

## SIXTH PAPER

*Examiners*—{ DR. U. N. GHOSHAL, M.A., PH.D.  
 { MR. INDUBHUSHAN BANERJEE, M.A.

*The questions are of equal value**THREE questions only to be attempted from EACH half*

## FIRST HALF

1. Constitutional History but sums up the changes in the outward form of government to which the vicissitudes of war, commerce, and agriculture slowly and painfully give birth.' Apply this dictum to the history of the Ancient Polity.

- State as fully as you can the case for and against Greek democracy.
8. Estimate the influence of the doctrine of the Law of Nature on the development of (i) Roman Law, (ii) International Law.
  4. Indicate the general characteristics of Ancient Indian republics, and analyse in detail the constitution of the Vajji-Lichchhavi confederacy.
  5. 'Feudalism is a temporary scaffolding upon which organised society grew.' (Sidgwick.) Explain.
  6. 'The Papacy is the ghost of the Holy Roman Empire sitting crowned on its grave.' (Hobbes.) Discuss
  7. Account for the failure of medieval representative institutions.

## SECOND HALF

1. 'Democracy in its purest form is to be found in the city-state alone. If we rise a stage above it, the modern world offers better instances of popular government than Greece.' Explain and illustrate.
2. 'A mixed government implies a balance of principles, a balance of class-power and a balance of interest.' Examine the constitution of Sparta, and determine the extent to which this three-fold balance was attained therein.
3. Distinguish the different types of Greek *tyrannis*, and indicate the analogies, if any, from the history of Rome. Criticize the orthodox Greek view of the nature and consequences of the Greek *tyrannis*.
4. Attempt an analysis of the constitution of Rome as it emerged after the close of the struggle between the patricians and the plebeians. Explain the causes that led to the concentration of the supreme administrative authority in the Senate.
5. 'The history of the Italian republics presents a remarkable general resemblance to the history of Ancient Greece.' Elucidate.

## SEVENTH PAPER

Examiners—{MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.  
,, TRIPURARI CHAKRABARTI, M.A.

*The questions are of equal value*

N.B.—Candidates are permitted to answer SIX questions in all : THREE from the First Half and THREE from the Second Half.

## FIRST HALF

1. How far do the Nazis and the Fascists challenge parliamentary system of government?
2. 'The accumulation of all powers, legislative, executive and judicial, in the same hands, may justly be pronounced as the very definition of tyranny.' (Madison.) How is this doctrine operating in the working of the constitutions of (i) England, (ii) France, (iii) Russia?
3. 'A student of Roman law and institutions will find in the House of Representatives in America, a striking reproduction of Roman legislative methods.' (Woodrow Wilson.) Discuss.
4. Compare the position and the functions of the Speaker of the House of Commons with those of (a) the Lord Chancellor in England, (b) the Speaker of the House of Representatives in America.
5. 'The French Ministry is an outstanding example of a weak executive.'  
'The French ministers enjoy enormous powers.'  
Discuss.

6. How is the subject regulated in his desire to appeal to the Judicial Committee of the Privy Council in civil and criminal causes and matters from: (i) Australia, (ii) Canada, (iii) Ceylon, (iv) India?

### SECOND HALF

7. Assess the importance of the Senate in the American Constitution. How does it compare with the Senate of Australia?

8. What were the achievements of the Duma in Russia? Why did it fail to establish responsible government in Russia?

9. How do the courts secure individual liberty in (a) England, (b) France, (c) U.S.A.?

10. Do you accept the view that everywhere in the world parliamentary institutions are on the decline? And why?

11. What is the exact relationship between the Quirinal and the Vatican in Italy to-day?

12. How far does the Swiss Constitution diverge from the American model?

### (ECONOMIC HISTORY OF ENGLAND)

#### SIXTH PAPER

*The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. SUSOBHANCHANDRA SARKAR, B.A. (OXON.)

*Attempt ANY THREE questions*

1. Explain the origin and characteristics of the Open Field System in English agriculture. What were its chief merits and defects?

2. What were the privileges aimed at by the English towns in the Middle Ages? How far was there a 'communal revolution' in England?

3. Examine the relation between the English craftgilds and the town-authorities and the gild-merchants.

4. Give a connected account of the development of the foreign trade of England up to the end of the Tudor period.

5. Explain the objects and provisions of the Statute of Artificers, and discuss its bearing on the social problems of Elizabethan England.

#### SECOND HALF

*Examiner*—DR. J. P. NIYOGI, M.A., PH.D.

*Attempt ANY THREE questions*

1. Examine critically the economic policy of England towards her colonies and dependencies before the American War of Independence.

2. 'At the end of the eighteenth century England had either to enclose or starve.' Consider the above statement.

3. Trace the main tendencies in English financial policy between 1840 and 1870.

4. 'The great depression of 1873-1886 is a turning-point in English economic history.' Comment on this statement.

5. Describe the main features of the Trade Union Movement in England since 1890. In this connection estimate the importance of the Trade Disputes Act of 1906 and the Trade Unions Act of 1927.

SEVENTH PAPER

Examiners—{ DR. A. P. DASGUPTA, M.A., PH.D.  
 ,, J. P. NIYOGI, M.A., PH.D.

*The questions are of equal value*

FIRST HALF

*Answer ANY THREE questions*

1. Indicate the main features of the land revenue settlements in Bengal during 1765-1786.
2. Describe the nature of the transit duties levied by the East India Company on Indian merchandise. What was the effect of these duties on trade and industries in India?
3. Describe the condition of Indian industries in the beginning of the nineteenth century. To what causes do you attribute the decline of the handicrafts in India?
4. Briefly trace the history of factory legislation in India. Point out how it has been influenced by pressure from abroad.
5. State the circumstances that led to the introduction of the Gold Exchange standard in India. What led to the breakdown of the system in 1917?

SECOND HALF

*Answer ANY THREE questions*

1. 'The landholders in contemplating the new system were more struck with the inconveniences they experienced from its introduction and early progress than they were with any advantages which they could promise themselves from its ultimate operation.' (*Fifth Report.*)  
 In the light of this remark comment on the immediate effect of the introduction of the permanent settlement on the Bengal Zemindars.
2. Give an account of the Indian co-operative movement, and point out the strength and limitations of this movement at the present time.
3. 'The history of British administration in India evidences that the government has not always been averse to active participation in industrial undertakings.'  
 Elucidate this statement with reference to the activities of government in this direction during 1900-1920.
4. 'The fifteen years from 1880 to 1895 were for the Indian agriculturists on the whole favourable.' Elucidate this statement.
5. Sketch the history of railway construction in India.

(CHINA AND JAPAN)

SIXTH PAPER

Examiners—{ MR. TRIPURARI CHAKRABARTI, M.A.  
 { DR. H. C. RAYCHAUDHURI, M.A., PH.D.

*The questions are of equal value*

FIRST HALF

*Answer ANY THREE questions*

1. Review briefly the history of Anglo-Chinese relations from 1793 to 1860.
2. Discuss the question of China's tariff autonomy from 1842 onwards.
3. Show how Manchuria has influenced the mutual relations of China, Japan, and Russia from 1895 to the present day.



4. What were the objects of Russian policy towards China during the latter half of the 19th century?
5. Examine Japan's claim to 'Special Interests' in China from 1902 to 1922.
6. State the history of extra-territorial jurisdiction in China, and discuss the present condition of the problem.

### SECOND HALF

*Not more than THREE questions to be attempted*

1. Form an estimate of the character and career of the Emperor Kuang Hsu. How did he defend his policy of reform?
2. The political system of the Chinese Empire under the Manchus has been described as an 'autocracy superimposed on a democracy'. Is this characterization justified?
3. 'The Sino-Japanese War marked a reversal in the relative positions of China and Japan. But it did not leave Japan a primary force in the Far East.' Discuss the full import of this passage.
4. Analyse the causes of the Revolution of 1911. Institute a comparison between the ideals and methods of (a) K'ang Yu-wei, and (b) Sun Yat sen.
5. Illustrate from the careers of Yuan Shih-K'ai and Chang Tao-lin the salient features in the character of the Chinese military adventurers of the 20th century.
6. 'This Conference has wrought a truly great achievement. The faith plighted here, kept in national honor, will mark the beginning of a new and better epoch in human progress.' How far could the Washington Conference really solve the problem of peace in the Far East?

### SEVENTH PAPER

Examiners—{ DR. N. C. BANERJEE, M.A., PH.D.  
 ,, RAMESCHANDRA MAJUMDAR, M.A., PH.D.

*The questions are of equal value*

*Answer only THREE questions from EACH half*

### FIRST HALF

1. Discuss the causes and circumstances which made the rule of the Tokugaw Soguns unpopular in Japan. Describe also the movement for the restoration of the Mikado to power.
2. Enumerate the chief problems before the Organizers of the Imperial Restoration (in 1867), and show how these were solved.
3. Sketch the history of Japan's relations with foreign powers from 1852 to 1895.
4. Give a short history of the agitation for constitutional government in Japan, and criticize Ito's conceptions regarding the same; point out the chief features of the Japanese Constitution which strengthen the power of the Emperor and Executive.
5. Write critical notes on any three of the following :—
  - (1) The different grades of Japanese nobility.
  - (2) Relations between Japan and Korea before 1884.
  - (3) Okuma's pension scheme.
  - (4) Causes of the Sino-Japanese War of 1904.
  - (5) The abrogation of extra-territorial rights of foreign powers in Japan.

## SECOND HALF

1. Discuss the methods adopted in Japan for the reorganization of industry.
2. Give a critical account of the development of education in the Meiji Era, with special reference to the system of technical education.
3. Give an account of Japan's policy towards China from 1914 to the present day.
4. Discuss critically Japan's policy towards (i) Korea, (ii) Soviet Russia, since the Great War.
5. 'In no department of civil life has Japan made greater advance than in that of the government, extension, and improvement of her cities.' Discuss the municipal progress in Japan in the light of the above remark.

(CONSTITUTIONAL HISTORY OF THE BRITISH DOMINIONS  
AND BRITISH INDIA)

## SIXTH PAPER

Examiners—{ MR. S. J. TARAPOREWALA, M.A.  
                  ,, TRIPURARI CHAKRABARTI, M.A.

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. 'The Statute of Westminster is not a revolutionary measure, . . . its importance lies mainly in the fact that it establishes as law what had before rested on convention.' Discuss.
2. Trace the history of the Imperial Conference and estimate its present importance.
3. To what causes do you attribute the secessionist movement in South Australia?
4. 'The system of provincial government in South Africa is deliberately devised to mark its distinctive character.' Amplify.
5. Estimate the relative strength and position of the Second Chambers in Canada and Australia.

## SECOND HALF

*Answer ANY THREE questions*

1. State the case for the Lower Canada Assembly between 1791 and 1837.
2. Trace the growth of the Federal movement in Canada between 1840 and 1867, and show how the federation of Canada differs from that of the U.S.A. and Australia.
3. Give a brief account of the development of constitutional government in the Australian Colonies from 1787 to 1850, noticing the salient features of the Acts of 1842 and 1850.
4. Explain the different processes by which the constitutions of Canada, Australia, and South Africa can be altered or amended.
5. Write a short essay on the spirit of the constitution of the Irish Free State.

## SEVENTH PAPER

*Examiners*—{MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.  
,, TRIPURARI CHAKRABARTI, M.A.

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Explain the objects and results of the India Act (1784) and of the India Act (1858).
2. Discuss the difficulties of the present Indian problem in regard to (i) minority representation in the legislature, (ii) safeguarding of British commercial interests.
3. Indicate the main stages in the development of judicial system in India from 1765 to 1861.
4. Describe the growth of the central authority in British India from 1773 to 1833.
5. Discuss the origin of legislatures in India. Describe the main stages in the development of the Indian Legislative Council from 1853 to 1909.
6. Write a note on the nature and range of the control exercised by the Secretary of State for India over the Government of India from 1858 to the present day.

## SECOND HALF

*Answer ANY THREE questions*

1. Explain carefully the different methods by which the responsibility of ministers to the provincial legislative councils in India may be now enforced.
2. Trace the history of the adoption of the system of communal electorates in India, and discuss its effects on the growth of responsible government in British India.
3. How far have the principles of devolution—administrative, financial, and legislative—been given effect to in the Government of India Act, 1919?
4. Give an account of the development of local self-government in British India from 1870 onwards.
5. Analyze the difficulties in the formation of an All-India Federation. How can they be overcome?
6. Describe the essential features of the constitutional relations of the Indian States with the Crown and the Government of India from 1858 down to the end of Lord Curzon's Indian administration.

## (MODERN EUROPE)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. SUSOBHANCHANDRA SARKAR, B.A. (OXON.)

*Answer ANY THREE questions*

1. Discuss the European settlement of 1814-1815. Do you consider it 'the work of obscurantists and reactionaries?'

2. What were the problems left unsolved by the Constitutional Charter of Louis XVIII? Show how they dominated the parliamentary proceedings of the Restoration period in France.

3. What were the ideas and teachings of Guiseppe Mazzini? Form an estimate of his work for Italy.

4. What is meant by the 'system of Metternich'? What were the considerations which shaped his political ideas? How far is it possible to justify his policy in Austria and elsewhere after 1815?

5. What was the condition of the Greeks in the last years of Turkish rule? Trace briefly the effect of European politics on the struggle for independence in Greece.

## SECOND HALF

*Examiner*—DR. A. P. DASGUPTA, M.A., PH.D.

*Answer ANY THREE questions*

1. The Congress of Aix-la-Chapelle (1818) marked 'the highest point reached in the attempt of the allied powers to govern Europe in concert.' Explain.

2. The Revolution of 1848 in France was 'initiated by the moderate monarchists, rapidly furthered by the republicans and in the end partly dominated by the socialists.' Criticize.

3. What circumstances led to the meeting of the Frankfort Parliament (1848)? What were the questions which faced it, and how were they tackled? Why did the Parliament prove a failure?

4. Give a short account of the internal condition of Russia under Alexander I and Nicholas I. Can you detect any signs of opposition to the established system in this period?

5. How far was the union between Belgium and Holland unnatural and unwise? What circumstances led to the Belgian revolt and favoured the establishment of the new Kingdom?

## SEVENTH PAPER

*The questions are of equal value*

*Answer only THREE questions from EACH half*

## FIRST HALF

*Examiner*—PROF. ARTHUR BROWN, M.A., LL.B.

1. Discuss the significance of the year 1848 in the history of Europe, with special reference to Central and Western Europe.

2. Summarize the history of the relation between Austria and Prussia from 1848 to 1866, and indicate the policy of Bismark with regard to the Austrian empire.

3. Sketch the history of the movement for independence in the Balkan States from 1848-1877.

4. Give a short estimate of Louis Napoleon and his policy. Do you justify his usurpation?

5. Write critical notes on *any three* of the following :—

(1) Midhat Pasha.

(2) The Schleswig-Holstein Question.

(3) The Republican regime in Spain (after 1873 February).

(4) Russian intervention in Hungary.

(5) The Chartist Movement and its failure.

## SECOND HALF

*Examiner*—DR. N. C. BANERJEE, M.A., PH.D.

1. Sketch the history of the political union *either* of Italy or of Germany from 1848 to 1870.
2. Discuss the conflict of different nations in the Austro-Hungarian monarchy, and point out the leading features of the political settlement of 1867.
3. Give a short account of the Third Republic in France, and discuss the chief national problems of modern France.
4. Enumerate the reforms inaugurated in Russia by Alexander II, and account for the failure of his policy of reforms.
5. Write critical notes on *any two* of the following :—
  - (a) The Franco-Russian alliance during the last quarter of the 19th century.
  - (b) The rise of Socialism in Germany.
  - (c) The statesmanship either of President Thiers or of Prince Bismarck.
  - (d) The rise of Bulgarian nationalism.
  - (e) The reform movement in Turkey and its failure.

## (ESSAY)

## EIGHTH PAPER

*Chairman*—PROF. S. N. SEN, M.A., PH.D., B.LITT.

- (1) Gladstone as a man and a statesman.
- (2) 'The flute seems to have been as familiar to Samudragupta's hand as the sword and the lance.'
- (3) Ikhnaton—the first individual in history.
- (4) Democracy in England in the 19th and the 20th centuries.
- (5) The League of Nations and the problem of world peace.
- (6) Rationalism in Islam.
- (7) The Government and the governed in Bengal during the latter part of the 18th century.
- (8) 'Cytor (Chitor), an ancient Cytty (now) a tombe of woonderfull magnificence' (*Sir Thomas Roe*.)
- (9) Maratha Imperialism in the 18th century.
- (10) Sikh Militarism.
- (11) The White Paper and the Dominion form of Government.
- (12) Recent challenges to Parliamentary Government.
- (13) The Industrial Revolution in India, its social and economic effects.
- (14) Japanese Imperialism as a factor in world politics.
- (15) France as a centre of political gravity in modern Europe.

## ANCIENT INDIAN HISTORY AND CULTURE

## INTERNAL EXAMINERS

- DR. PRABODHCHANDRA BAGCHI, M.A., D.LITT.  
 MR. JITENDRANATH BANERJEE, M.A.  
 DR. NARAYANCHANDRA BANERJEE, M.A., PH.D.  
 PROF. BENIMADHAB BARUA, M.A., D.LIT.  
 „ D. R. BHANDARKAR, M.A., PH.D.  
 MR. HARANCHANDRA CHAKLADAR, M.A.  
 DR. NALINAKSHA DATTA, M.A., B.L., PH.D., D.LITT.  
 „ UPENDRANATH GHOSHA, M.A., PH.D.  
 „ STELLA KRAMRISCH, PH.D.  
 MR. NARENDRAKUMAR MAJUMDAR, M.A.  
 DR. PANCHANAN MITRA, M.A., PH.D.  
 „ KALIDAS NAG, M.A., D.LITT.  
 „ HEMCHANDRA RAY, M.A., PH.D.  
 „ H. C. RAYCHAUDHURI, M.A., PH.D.  
 MR. BINAYCHANDRA SEN, M.A.  
 „ PRABODHCHANDRA SENGUPTA, M.A.

## EXTERNAL EXAMINERS

- PROF. A. S. ALTEKAR.  
 MR. N. K. BHATTASALI, M.A.  
 DR. NIRANJANPRASAD CHAKRABARTI, M.A., PH.D.  
 „ SURENDRAKISOR CHAKRABARTI, M.A., PH.D.  
 MR. TARAKCHANDRA DAS, M.A.  
 „ HARITKRISHNA DEB.  
 „ K. N. DIKSHIT.  
 DR. JONVEAL DUBREUIL, M.A.  
 „ B. B. DUTT, D.Sc.  
 MR. DEBAPRASAD GHOSH, M.A.  
 DR. NARENDRANATH LAW, M.A., B.L., PH.D.  
 „ RAMESCHANDRA MAJUMDAR, M.A., PH.D.  
 MR. NANIGOPAL MAJUMDAR, M.A.  
 PANDIT BABUA MISRA, JYOTISHACHARYA.  
 DR. SITANATH PRADHAN, M.A., PH.D.  
 RAI SARATCHANDRA RAY, BAHADUR, M.A.  
 DR. R. SHAMA SASTRI, B.A., PH.D.  
 „ V. S. SUKTHANKAR.

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE of the following questions*

1. What do you know of the Viros, their original home and migration to different parts of Asia?

2. Discuss the problem of the religious conflict between the Iranians and the Indo-Aryans. What were, according to you, the real causes of this conflict?

3. Estimate the value of Ṛg-Veda Samhitā as a source of early history of the Indo-Aryans.

4. Define the geographical zone of the Indo-Aryans, and describe briefly its political atmosphere in the period of the Ṛg-Veda.

5. Give a picture of the Vedic society, with special reference to the position of women and the different classes.

### SECOND HALF

*Only THREE questions are to be answered*

1. Describe fully the status of the Woman in Epic times, with special reference to her social and legal position as Wife. Was any form of divorce known in those times?

2. (a) Expound briefly the epic Philosophy of War.

(b) Sketch the ancient Military Tactics, as revealed by the descriptions of battle scenes in the epics.

3. Compare and contrast the social conditions in the Sanskrit epics and in early Buddhist works.

4. Outline the development of the religious and philosophical ideas in the epics.

5. Justify or criticize, with apt illustrations, the statement: 'We have thus three diplomatic stages reflected in our poem (*scil.* the Mahābhārata): the popular assembly, already restricted to protestation in civil matters; the public aristocratic assembly on war matters; the private priestly council on all matters.'

### SECOND PAPER

*The questions are of equal value*

*Attempt only THREE questions from EACH half*

#### FIRST HALF

1. Give a brief account of the ancient Mahājanapadas of Kosala, Magadha, Vatsa, and Avanti. Show how they were finally united. Refer to the sources of your information.

2. Sketch the career of Chandragupta Maurya, with special reference to (a) his ancestry, (b) his struggle with the Greeks, (c) extent of his empire, and (d) his administration.

3. 'But now, in consequence of the practice of Dhamma by King Priyadarśin, Beloved of the gods, the sound of drum has become the sound of Dhamma.' Discuss the full import of this passage.

4. Write a critical note on the Śātavāhana kings, with special reference to (a) their original home, (b) relations with the rulers of Central and Eastern India, and (c) extent of their empire in the Deccan.

5. Comment on the following :—

'Before it (Barbaricum) there lies a small island, and inland behind it is the metropolis of Scythia, Minnagara; it is subject to Parthian Princes who are constantly driving each other out.'

## SECOND HALF

1. Discuss the relations of the Sungas with the Bactrian Greeks. Comment in this connection, on the statements :

*aruṇad Yavanah Śāketam ; aruṇad Yavane Madhyamikām.*

2. 'Kanishka's fame rests not so much on his conquests, as on his patronage of the religion of Śākyamuni.' Elucidate.

3. 'The period between the extinction of the Kushān and the rise of the Gupta dynasty is one of the darkest in the whole range of Indian History.' Critically examine this statement, with special reference to Nāga rule in Northern India.

4. Write critical and historical notes on the following passage :—

'Whose great good fortune was mixed up with, so as to be increased, by (his) glory produced by the favour shewn in capturing and then liberating Mahendra of Kosa's, Vyāghrarāja of Mahākāntāra, Maṇṭarāja of Kerala, Mahendra of Pishtapura Svāmidatta of Koṭṭura on the hill, Damana of Eraṇḍapalla, Viṣṇugopa of Kāñchī, Nīlarāja of Avamukta, Hastivarman of Veṅḍī, Ugrasena of Palakka, Kubera of Devarāshtra, Dhanañjaya of Kuṣthalapura and all the other kings of the region of the south.'

5. Give an account of the Indian resistance to the Hūṇa invaders in the fifth and sixth centuries A.D.

## THIRD PAPER

*The questions are of equal value*

## FIRST HALF

*Attempt THREE questions only*

1. Give a short account of the dynasties that ruled in the lower Indus valley and Baluchistan during the period c. 500 A.D. to c. 724 A.D. Indicate your sources of information.

2. *Ślāghyaḥ sa eva guṇavān rāgadveṣabahiṣkṛtaḥ  
Bhūtārthakathana yasya stheyasyeva sarasvatī.*

How far has Kalhana reached this ideal in his *Rājatarāṅgiṇī* ?

*Or,*

Briefly review the history of Kashmir during the period c. 1100 A.D. to c. 1150 A.D., with special reference to the struggle between the royal power and the landed aristocracy.

3. Write a short account of the Pālas of Kāmarūpa. Refer to your sources of information.

4. Who were the kings of Eastern Bengal during the period c. 950 A.D. to c. 1150 A.D. ? Tell briefly the story of their relations with neighbouring powers.

5. Write a brief note on the struggles of the Pratiharas of Kanauj with foreign powers. Refer to your sources of information.

6. Write a critical note on the achievements of the Paramāra king, Bhoja.

*Or,*

Briefly review the career of the Caulukya king Jayasimha Siddharāja, with special reference to his epigraphic records.



## SECOND HALF

*Attempt ANY THREE of the following*

1. 'The Western Chalukyas were constantly at war with the Pallavas' who were their most powerful and inveterate foes.' (*Fleet*). Examine the evidence on which this statement is based.

2. Discuss the relations of the Rāshtrakūṭas of Mālkheḍ with the Gurjaras and the Pālas of Bengal. Refer to some of the important contemporary documents throwing light on this question.

3. (a) Summarize the events that took place in the history of the Chālukyas of Kalyāṇī from the death of Someśvara I to the accession of Vikramāditya (VI) to the throne.

(b) What information is available regarding the concluding years of the latter's reign ?

4. What do you know of the career of Bijjala, Kalachurya, and the history of his family after his death ?

5. (a) What, in your judgment, were the characteristic features of the Chola Administration ?

(b) Indicate the extent of the empire of the Cholas at the zenith of their power, adding a note on their conquests outside India.

6. Who were the rulers of Dvārasamudra during the period *circa* 1117 A.D. to c. 1310 A.D. ? Give a brief account of their relations with the neighbouring powers.

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Not more than THREE questions are to be attempted*

1. What are our main sources of information regarding the ancient geography of India ? Discuss their relative value.

2. Discuss the exact denotation of the terms 'Jambudvīpa' and 'Bhārata-varsha.'

3. Write a note on the varying boundaries of the Madhya-deśa. Refer to the sources of your information.

4. Discuss the identity of the following :—

(a) Tāmra-varṇa.

(b) Suktimat.

(c) Riksha.

(d) The Kṛita-mālā.

5. Name the principal cities of Ancient India which stood on the banks of (a) the Ganges, (b) the Narmadā, (c) the Kāverī, and (d) the Tāmraparṇī.

6. Draw a map of India, locating the principal rivers issuing from the Himavat and Sahyādri ranges.

## SECOND HALF

*Not more than THREE questions are to be answered*

1. Draw a map of India, locating therein the principal towns and places of Buddhist pilgrimage visited by Yuan Chwang.

2. Discuss the importance of the Greek records, specially Ptolemy's Geography, in the study of the ancient Geography of India.

3. Describe the inland routes of communication connecting Northern with Southern India, as known from Buddhist sources.

4. Write a note on the ports in India, Ceylon, and Indonesia where ships engaged in the maritime intercourse between India and China used to call.

5. Write geographical notes on :—

Udyāna, Argaru, Barygaza, Sākala, Barbaricum.

(GROUP I—A)

(ARCHÆOLOGY—EPIGRAPHY, ETC.)

FIFTH PAPER

*The figures in the margin indicate full marks*

*Answer THREE questions from EACH group of which Question*

*No. 1 is compulsory*

GROUP A

1. Translate *three* of the following extracts into English, adding 20 critical and explanatory notes :—

(a) Pulisā pi cha me ukasā chā gevayā chā majhimā chā anuvīdhiyanti saṃpaṭipādayanti chā alaṃ chapalaṃ samādapayitave hemevā aṃtamahāmātā pi esa hi vidhi yā iyaṃ dhammena pālanā dhammena vidhāne dhammena sukhiasā dhammena goti ti.

(b) Idha na kiṃchi jīvaṃ ārabhitpā prajāhitaṃ na cha samājo katavyo bahukaṃ hi dosaṃ samājambhī pasati Devānaṃpriyo Priyadasi rājā asti pi tu ekachā samājā sādhu-matā Devānaṃpriyasa Priyadasino rāṇo.

(c) Te sava-pāsāṃdesu viyāpaṭā dhammādhithānāye dhamma-vaḍhiye hita-sukhāye cha dhamma-yutasa Yona-Kambocha-Gamdhālesu Lathika-Pitenikesu e vā pi aṃne āpalaṃtā bhaṇimayesu bābhanibhiyāsu anāthesu mahālakesu cha hita-sukhāye dhamma-yutāye apalibodhāye viyāpaṭā se.

(d) Adhikāni adbhātiyāni vasāni ya hakaṃ upāsake no tu kho bāḍham prakānte huraṃ ekaṃ savachharaṃ sātireke tu kho saṃvachhare yaṃ mayā saṃghe upayite bāḍham cha me pakānte imiṃvā chu kālena amisaṃ samānā munisā Jambudīpasā misā devehi.

(e) Etakā vā me icchha aṃtesu pāpūneyu lājā hevaṃ icchati anuvigina hveyū mamīyāye asvaseyu cha me sukhāṃ meva cha laheyū mamate no dukhaṃ hevaṃ cha pāpūneyu khamisati ne lājā e sakiye khamitave mamaṃ nimitaṃ cha dhammaṃ chaleyū ti hidaḷogaṃ cha palālogaṃ cha ālādhayeyū.

2. Discuss the chronology of the inscriptions of Aśoka.

15

3. Give a brief account of the religious activities of Aśoka as mentioned in his edicts, and determine his position with reference to the Buddhist Church.

15

4. What light do the edicts throw on the existence of popular and lucky rites, and what was the attitude of Aśoka towards them?

15

5. State in brief the reforms introduced by Aśoka in the administration of his Empire.

15

## GROUP B

1. Transcribe *two* of the extracts quoted in Question 1, Group A, in 18  
Aśoka Brāhmī, and discuss their linguistic peculiarities.
2. Comment on the following fully, bringing out their historical im- 16  
portance :—  
(a) Dutiye cha vase achitayitā Sātakaminiṃ pach-hima-disam haya-  
gaja-nara-radha-bahulaṃ daṃḍaṃ paṭhāpayati.  
(b) Etinā cha kaṃmapadāna-saṃnādena sambita-sena-vāhane vipa-  
mumchitu Madhuraṃ apayāto Yavana-rājā Dīmīta . . . . .
3. Mention all you can gather from inscriptions about the Śuṅgas and 16  
their feudatories.
4. (a) Translate the following inscription into English, adding an 16  
explanatory and historical commentary :—  
Adhichhatrāyā rāño Śonakāyana-putrasya Vamgapālasya putrasya  
rāño Tevanīputrasya Bhāgavatasya putreṇa Vaihidarīputreṇa Āśhāḍha-  
senena kārītāṃ.  
(b) Discuss the historical and religious importance of the Besnagar  
column of Heliodorus
5. Write short notes on *any four* of the following :— 16  
Dhanīma-vijaya, Alikasundara, Ājīvika, Vinaya-samukase, anusarī-  
yāna, Pushyamitrasya shashṭhena, Nāṃdarāja-ti-vasa-sate.

## SIXTH PAPER

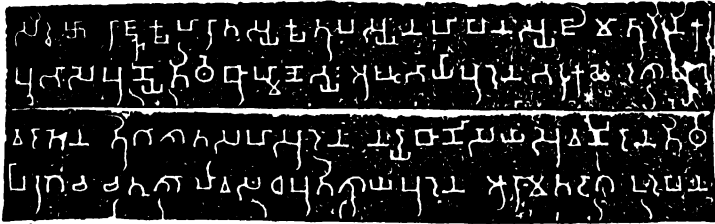
## FIRST HALF

*The figures in the margin indicate full marks*

*Attempt ANY THREE questions of which Question No. 5 must be one*

1. Discuss the date of the Nānāghāt inscription of Queen Nāyanikā. 16  
What light does it throw on the history of the Early Sātavāhanas?
2. (a) Who is the Sātakarṇi mentioned in the Sāñchi inscription? 8  
(b) Indicate the extent of the empire of Gautamīputra Sātakarṇi. 8
3. Is the Taxila copperplate of Patika earlier or later than the 16  
Mathurā Lion Capital inscriptions?  
What date would you assign to the Amohinī tablet from Mathurā?  
Give reasons for your answer.
4. Write short notes on :— 16  
(i) saṃvatsaraye 184 ajasa Śravanasa masasa divase treviṣe.  
(ii) Mahārāja Guṣhāna.  
(iii) Kaisara Kanishka.  
(iv) Isāpur pillar inscription.

5. Transcribe the following fragmentary lines in Roman characters 18  
and discuss the palaeography :—

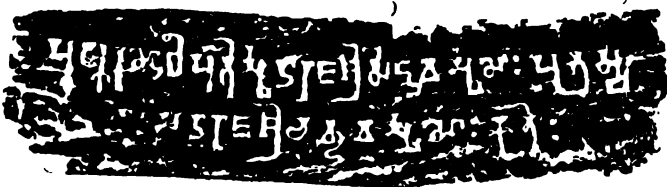


### SECOND HALF

*The questions are of equal value*

*Attempt ANY THREE questions*

1. What information can you gather from the Allahabad Pillar Inscription regarding Samudragupta's imperial power?
2. Arrange chronologically the inscriptions of the Gupta period recovered from Bengal. How do they differ from other contemporary inscriptions in regard to general contents?
3. Attempt a critical reconstruction of the religious history of the Imperial Gupta period from inscriptional data.
4. Annotate *any four* of the following :—
  - (a) Daivaputra-shāhi-shāhānushāhi-śaka-murundaiḥ.
  - (b) Devarāja iti priya-nāma. . . . .
  - (c) vichalita-kula-lakshmi-stambhanāy-odyatena.
  - (d) Kautsaḥ Sāba iti khyāta Virasenah kul-ākhyayā.
  - (e) saṁskāritam-idam bhūyaḥ śreṇyā bhānumato griham.
  - (f) apradā-dharmmeṇa tāmrapaṭṭikṛitya kshetra-stokan-dātum-iti.
5. Transcribe the following. To what date would you assign it on palaeographical grounds?—



### SEVENTH PAPER

*The questions are of equal value*

### FIRST HALF

*Only THREE questions are to be attempted, of which the LAST must be one*

1. 'It is clear that the punch-marked coinage was a private coinage issued by guilds and silversmiths with the permission of the ruling powers.'  
Do you agree?

2. Describe the special features of the coins of the Kunindas and the Yaudheyas. How do you date them?

3. How far do the types of the Indo-Bactrian coins help us in arranging them chronologically and dynastically?

4. Analyze the issues of :—

- (a) Gondophares and his successors;
- (b) The Northern Satraps.

5. Write what you know about *any three* of the following :—

- (a) Commemorative medals issued by certain Indo-Bactrian rulers,
- (b) Joint types of Azes and Azilises,
- (c) Coins of Kosam,
- (d) Coins bearing the names of Hermaios and Kujula-Kadphises,
- (e) The weight system of the Kushana gold coins.

## SECOND HALF

*Only THREE questions are to be attempted*

1. (a) Trace the connection of the Kshatrapa families of Western India with Northern India from numismatic evidence.

(b) What conclusions do you arrive at from a study of the busts on the coins of Nahapāna?

2. Can you distinguish between the monetary issues of the Sātavāhanas and their feudatories?

3. Trace the successive changes in the metrology of the gold issues of the Imperial Guptas and discuss their significance.

4. 'The Gupta Empire reached its high watermark in the reign of Chandragupta II.' Illustrate this remark by reference to his coins.

5. Write descriptive and explanatory notes on :—

- (a) Coins of Jivādāman.
- (b) Lead and potin coins from Kolhapur.
- (c) Pratāpa type of Kumāragupta I.
- (d) Coins of Narendrāditya (?).
- (e) Kalighat hoard.

## EIGHTH PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

1. Write an essay on *any one* of the following subjects :—

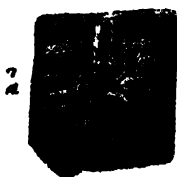
50

- (1) Foreign influence on Ancient Indian Coins.
- (2) Origin of the Brahmi alphabet.
- (3) Non-monarchical forms of government as known from coins and inscriptions.

### SECOND HALF

1. Describe *any eight* of the types of coins reproduced on the attached plate and add explanatory notes on each.

50



## (GROUP II)

## (SOCIAL AND CONSTITUTIONAL HISTORY).

## FIFTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. 'Women played a very important part in the domestic and social life of the Vedic Aryans.' Justify this statement.
2. Does Vedic literature offer any evidence for prevalence of the following practices : (a) exposure of aged parents, (b) widow re-marriage, (c) burning of widows, and (d) child-marriage?
3. Attempt after Vātsyāyana a sketch of the daily life of a city-bred man of fashion in his time.
4. 'The Gṛhyasūtras contain a store-house of material in regard to rites and ceremonies connected with home-life, such as no other body of literature in the world possesses.' Elucidate.
5. What light do the Jātakas throw upon the occupations of the *gahapati* and the *śeṭṭhi*? How far in your view may these be represented as separate castes?

## SECOND HALF

*Answer only THREE questions*

1. Describe the ceremony of *Upanayana*, and indicate its importance in the life of the Vedic Indian.
2. In the marriage ritual can you point out any ceremonies that the Indians have in common with other branches of the Aryan people?
3. When was it permissible for a Hindu girl to seek out a husband for herself? Do you find any evidences of courtship in ancient India? How far was *Stayamvara* a self-choice for the bride herself?
4. Discuss what part charity played in the ordinary life of a Hindu in ancient times.
5. Write notes on the following :—  
Putrikā, Snātaka, Vratya, Śrāvanakarma, Agnihotra.

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## SIXTH PAPER

*The questions are of equal value**Only THREE questions to be attempted from EACH half*

## FIRST HALF

1. Give a sketch of the economic life in ancient India, with special reference to village organization, land tenure, and agriculture.
2. Sketch the rise of the guilds from the close of the Vedic period to the end of the Maurya period.

3. Discuss the history of Metallic Currency in ancient India, with special reference to *Niṣkas*, *Satamānas*, and *Kārsāpaṇas*.

4. Discuss the amount of State interference in the economic life of India during the Maurya period. Do you regard Kauṭilya's economic system as an experiment in State Socialism?

5. Write critical notes on any two of the following :—

(a) The Textile Industry in ancient India.

(b) State aid to agriculture.

(c) Monopolies in the Arthaśāstra.

## SECOND HALF

1. Critically examine the data supplied by the Greek writers and the *Arthaśāstra* of Kauṭilya about the ownership of land in the Mauryan age. Examine the view of Hopkins that the 'old Hindu legislator held that the ownership in land was double.'

2. Describe the condition of labour as envisaged by Kauṭilya. How far does he favour State intervention either in favour of the employer or of the employee?

3. Describe the provisions in the *Arthaśāstra* of Kauṭilya about (i) espionage, (ii) poor relief, and (iii) working of mines.

4. What were the different types of land tenure prevailing in Ancient India? Do we get any data for determining land prices and conditions of leases during any periods of Ancient Indian history? If so, discuss the conclusions that can be drawn from them.

5. Discuss the antiquity and main features of the village organization in Ancient India. What are the main types of villages mentioned in the *Arthaśāstra*?

## SEVENTH PAPER

*The questions are of equal value*

### FIRST HALF

*Only THREE questions are to be attempted*

1. Sketch the political life of the Vedic Aryans, with special reference to (a) the nature of regal authority, and (b) the amount of popular participation in political life.

2. Give a short account of the rise of absolute monarchy in India and the gradual disappearance of checks on the king's power.

3. Discuss the political ideals of the author of the *Arthaśāstra* or of the *Manusmṛiti*.

4. Give a short account of the Indian republics, with special reference to their location, their different types, and the causes of their disappearance.

5. Write critical notes on any three of the following :—

(a) The Judiciary of the *Arthaśāstra*.

(b) The Hindu State and its relation to economic life.

(c) The paternal ideal of Aśoka.

(d) The responsibility of ministers.



## SECOND HALF

*Only THREE questions are to be attempted*

1. Show how and in what departments of administration the common people, as against the royalty and aristocracy, asserted their individuality.

2. Compare the *Arthasāstra* of Kautilya and the *Indica* of Megasthenes as source-books of Hindu administrative history.

3. Discuss the progress of co-operative activities in the public life of ancient India.

4. Kautilya is generally supposed to be ruthless in his diplomatic policy. How then do you explain his insistence on the pacification of the conquered territories?

5. Comment on any three of the following :—

(a) The *Sāntiparvan* as a source of Hindu political theories.

(b) The rôle of the *Sūdra* in Hindu polity.

(c) Hindu revenue administration.

(d) The *Prakritis* as the basic elements in a Hindu State.

(e) The function of the Accountant in Hindu public administration.

## EIGHTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer only THREE questions*

1. Describe the physical characters of the Negrito people. Is there any evidence to show the presence of a Negrito element in India?

2. Show the distribution of the Pre-Dravidian peoples. How do they differ from the Dravidians?

3. Attempt a racial classification of the peoples of India, indicating the peoples outside India with whom each type may show ethnic affinity.

4. Give a short account of the great movements that took place among the peoples in Central Asia, and indicate how far they affected India.

5. Discuss the influence of climate on skin-colour, hair-form, and nasal index.

6. Write ethnic notes on any five of the following :—

Ainu; Nesiot; Wakhi; Hamite; Berber; Bushman; Neo-Amerind; Esquimaux; Basque; Slav.

## SECOND HALF

*Only two questions need be attempted*

1. Give an account of the ethnology of the hill tribes of Assam.

2. Give an account of the ethnology of Nepal.

3. Write an account of the ethnology of the 'Central Belt' of India.

4. Write accounts of the (1) Irula, (2) Paniyan, (3) Kadir, and (4) Kurumba, under the following headings :—

(i) Habitat, (ii) physical features, (iii) economic life and material culture, (iv) language, and (v) religion.

(GROUP III)  
(RELIGIOUS HISTORY)

## FIFTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE of the following questions*

1. What light does a comparative study of the Vedic and Iranian religions throw on the history of the Indo-Iranian religious institutions ?
2. Determine the real place of the hymns of the Atharva-Veda in the religion of the Vedic period.
3. What are, according to you, the main characteristics of the Indo-Aryan religion of the Vedic period ?
4. It has been said that 'indefiniteness of outline and lack of individuality characterize the Vedic conception of the Gods.' What is, according to you, the significance of this statement ?
5. Discuss the Vedic conceptions of the world and its origin.

## SECOND HALF

*Only THREE questions are to be answered*

1. Describe briefly how the Vedic Aryan speculated about the place of the departed spirits. What was his attitude to his dead Fathers ?
2. Write a note on the subject of cow-slaughter by the Vedic Aryan. What was Yājñavalkya's opinion about the eating of beef ?
3. What was the position of the seer-priests in the estimation of the Vedic Aryans ?
4. Describe the characteristics of *any two* of the following Vedic deities : —
  - (1) Trita Aptya.
  - (2) The Ṛbhus.
  - (3) Vivasvat.
  - (4) Bṛhaspati.
  - (5) Tvastṛ.
  - (6) Parjanya.
5. Write short notes on *any four* of the following :—  
Śastra, Nāndīmukha, Ṛta, Stotra, Nārāsaṃśa, Aptoryāma.

## SIXTH PAPER

*The questions are of equal value*  
*Not more than THREE questions to be attempted from EACH half*

## FIRST HALF

1. It has been said that epic mythology 'on the one hand touches upon that of the Purāṇas and on the other reaches back to the Vedic age.' Is this characterization correct ? Give reasons for your answer.

2. To what extent is epic mythology affected by the star cult ?
3. Write a critical note on the position of *Dyaus* and *Varuṇa* in the epic.
4. Give a critical exposition of the epic concepts of *Dāna-vidhi*, *Karma*, and *Prasāda*.
5. 'Foolish is he who says that Vāsudeva is only a man.' 'Krishna would do what he could as a man; *puṇyākārataḥ*, he could not interfere with the will of the gods.' Examine these contrasted views about the character of Krishna in the Great Epic.

## SECOND HALF

1. Discuss the importance of the Besnagar Inscription in the history of Bhagavatism.
2. In which work do we get the earliest exposition of the *Ekāntika Dharma* ? Discuss its date and examine the nature of its indebtedness to the pre-existing literature of India.
3. Give a brief account of the main tenets of the *Pāncarātra* system.
4. Discuss the origin of the *Virāṣaiva* sect. How does the *Virāṣaiva* system compare with the *Viśiṣṭādvaitavāda* ?
5. Discuss the antiquity of Durgā-worship in India. In what relation did the cult of Durgā stand to Bhāgavatism in the period of the Great Epic ?

## SEVENTH PAPER

*The questions are of equal value*

*Answer ANY SIX of the following questions*

1. Describe the state of Buddhism either during the reign of Aśoka and Kaniṣka or during the reign of Samudragupta and Harṣavardhana so far as it can be inferred from the historical monuments.
2. Discuss the relative antiquity of the Pali and Sanskrit Buddhist literature.
3. Give an account of the spread of Buddhism in India.
4. Trace the rise and growth of Mahāyāna Buddhism.
5. How far, in your opinion, are the traditions about the sessions of the four Buddhist councils authentic ?
6. What do you know about the fragments of Buddhist literature found in Eastern Turkestan, and what light do they throw on the condition of Buddhism in that region ?
7. How far do the fundamental principles of Hinayāna and Mahāyāna represent the original teachings of Buddha ?
8. Write notes on the 'four Aryan Truths' and the 'twelve-fold chain of causation'.
9. What do you know about the teachings of the six Tittihas ?
10. (a) Write a short essay on the constitution of the Buddhist Saṅgha.  
(b) Mention some of the Saṅghakammas.

## EIGHTH PAPER

*The questions are of equal value**Answer six questions only*

1. What do you know of the life and teachings of Gosāla Mañkhaliputta? Critically discuss Dr. Barua's view about his influence on the formulation of the Jaina doctrine and on the career of Mahāvira.
2. Criticize the following statement :—  
'The doctrinal differences and differences on minor points are so great that Jainism and Buddhism must be considered as two different systems of religion . . . But that as a system Jainism is much later than Buddhism is unquestionable.'
3. Critically discuss the story of Chandragupta's conversion to Jainism, bringing out its importance from the historical point of view.
4. Discuss the ideals of asceticism in the Ācārāṅga Sutta.
5. 'Practically all the most important sixteen Mahājanapadas, in one or other way, came under the influence of the 'Jaina Church.' Comment and discuss.
6. Compare and contrast the Jaina and Buddhist conceptions of soul, karma, and mokṣa.
7. Discuss the historical beginnings of Jainism and the cleavage between the Svetāmbara and Digāmbara churches.
8. Write short notes on *any four* of the following :—  
Niggaṇṭha ; Cāujjāma-saṁvara ; Chālābhijati ;\* Akiriyavāda ; Astikāyas ; and Puḍgala.
9. Ascertain the place of laity in Jainism as compared with Buddhism.
10. Discuss the authenticity of the Jaina canon.

(GROUP I.—B.)

(ARCHÆOLOGY—FINE ARTS)

## FIFTH PAPER

*The questions are of equal value**THREE questions only are to be attempted from EACH half*

## FIRST HALF

1. Describe the Bagh and Sigirya frescoes. Is there any affinity between them and the Ajanta paintings in technique and treatment?
2. Discuss the characteristics of early Chalukyan art with special reference to the sculptures of Bādāmi.
3. Why is the Javanese art of the eighth and ninth centuries termed 'classical'?
4. Differentiate between the plastic traditions of Pre-Khmer and Classical Khmer periods.
5. Write an essay on the art-treasures of Serindja and the influences moulding their growth and formation.

## SECOND HALF

1. In what sense can Mauryan art claim to be descended from the art of the Indus valley?
2. Compare and contrast the Yakṣiṇī relief statues at Bharhūt and Mathurā.
3. Trace the development of the Amarāvati school of sculpture and its influence outside India.
4. Compare and contrast the Sārṇāth Gupta Buddha and the Chola bronze Nāṭarāja.
5. Briefly delineate the salient features of mediæval Orissan sculpture.

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be attempted*

1. Trace the history of the growth and development of iconoplastic art in India.
2. Add explanatory notes on the following :—
  - (a) *Āṅgula* unit and *Drāviḍa māṇa*,
  - (b) *Udicyateṣa* of certain types of Sūrya icons,
  - (c) *Sraścakra* and *prabhāraś*.
3. Discuss the importance (from an iconographic point of view) of the following :—
  - (a) *Mañibhadra Yakṣa* (Pol Pawaya).
  - (b) *Saptamāṭṭrikā* relief (Ellora).
  - (c) *Bhīṣa Liṅga*.
  - (d) Lotus flower as an attribute of Viṣṇu.
4. Describe the special features of the principal *Nṛttamūrtis* of Siva. Discuss the nature of symbolism supposed to be underlying this type.
5. (a) How do you identify the celebrated '*Trimūrti*' of Elephanta ?  
 (b) Explain the significance of *Sarabhamūrti* and *Ekaṇḍamūrti*.  
 (c) Describe the *Kalyāṇasundara* relief at Ellora (Temple of Rāmeśvara).

## SECOND HALF

*Answer Question No. 5 and ANY TWO from the rest*

1. Write an essay on the evolution of the Buddha type in sculpture.
2. What is a Jataka ? What is its philosophical background ? Describe four representations of Jatakas from the Bas-reliefs of Bharhūt.
3. Describe an image of Ratnasambhava and three of the principal conceptions emanating from him.
4. Describe briefly the iconographical features of any three of the following : (i) *Sthirachakra*, (ii) *Ṣaḍakṣarī Lokeśvara*, (iii) *Kurukullā*, (iv) *Jāṅguli*, (v) *Māricī*.
5. Identify and describe the special features of the deities represented on plates A and B.

M.A. EXAMINATION

Plate A.



Plate B.



## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Attempt ANY THREE questions*

1. Write a note on the brick temples of Northern India.
2. Outline the relation of architecture and sculpture in Orissa in the main phases of this school.
3. Describe the evolution of the stupa.
4. To what extent does the study of Śilpa śāstras supplement our knowledge of Indian architecture?
5. Describe any Mauryan pillar and discuss the question of foreign influences.

## SECOND HALF

*Answer ANY THREE questions*

1. To what extent did (a) bamboo structures and (b) heavy wood structures affect lithic forms?
  2. Write a note on ritual in its bearing on the ground plan of temples.
  3. Is it justifiable to consider the Kalinga style of architecture separate from Nāgara style?
  4. Write a note on the less frequent types in Northern Indian architecture with regard to :—
    - (a) ground plan,
    - (b) form of tower.
  5. Trace the evolution of the *torana* and the door-frame in Northern Indian architecture.
- 

## EIGHTH PAPER

*The questions are of equal value**Attempt THREE questions only from EACH half*

## FIRST HALF

1. Describe the *Rathas* at Māmallapuram, and discuss the origin and subsequent history of each type.
2. Reconstruct secular architecture in South India as shown in the reliefs of *Vedgi*.



3. Write a note on the relation of architecture and sculpture—
  - (a) in South India in the Pallava period ;
  - (b) in Hoysala architecture ;
  - (c) in Cālukya temples.
4. What distinguishes the *Vesara* style?
5. Enumerate the apsidal structural temples of South India, and discuss the origin and development of this type with the help of rock-cut examples.

## SECOND HALF

1. Write a note on structural *Caitya* Halls and describe the examples in South India.
2. What are the distinguishing features of South Indian *stūpas* and railings ?
3. Discuss the temples at Paṭṭadakal with regard to Northern and Southern elements.
4. Describe the chief type of pillars in Ajanta and Bagh, and state their peculiarities as part of cave architecture.
5. Reconstruct the types of domestic architecture as shown in the paintings of Ajanta.

## (GROUP V)

## FIFTH PAPER

*The questions are of equal value*

*Only six questions are to be attempted*

1. Describe the somatic characters of the Dravidians. Discuss their origin and distribution.
2. Discuss the value of the cephalic (length-breadth) index as a criterion of race. Show the distribution of the brachycephals in Asia.
3. Describe the physical characters of the Hamites, indicating their origin and distribution.
4. Show the distribution of the dolichocephals in North America, and discuss the probable lines of their migration.
5. Show the present distribution of the Mediterranean race.
6. Discuss the racial anthropology of the German people.
7. Compare the physical characters of the Negrito and the Negrito, and show their present distribution.
8. Discuss the influence of climate on hair-form, pigmentation, and the nasal index.
9. Discuss the main ethnic types in the people of the province of Bengal as at present constituted. How far can these types be traced in the other provinces of India ?
10. Write ethnic notes on *any six* of the following peoples :—  
 Basque, Neo-Amerind, Nesiote, Himyarite, Ainu, Kadir, Wakhi, Tungus, Pareoan, Tehuelche.

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Describe the various methods of acquiring a mate in India. Do you find any cases of preferential mating here ?
2. Explain the constitution of a family. How does matrilocal or patrilocal residence affect family life ? Discuss whether primitive society is marked by a greater looseness of the family unit than the civilized one.
3. Discuss how far it is possible to frame a general law of social evolution for the whole of mankind.
4. Write notes on :—  
avunculate ; sexual communism ; sib ; age-classes ; levirate.
5. Describe the position of woman in primitive society. How does it compare with her position among the Hindus at present ?

## SECOND HALF

*Only two questions need be attempted*

1. State and discuss the main theories of the origin of the spirit concept, and state your own view with reasons.
2. Discuss the different theories regarding the relation between religion and magic, and state your own view with reasons.
3. Write an essay on the relationship of Religion and Art, drawing your illustrations, as far as possible, from India.
4. Write a paper on animistic ideas in the religion, folklore and folk-custom, and socio-religious ceremonies of the Hindus of Bengal.



## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Only two questions need be answered*

1. Write an essay on the 'Indus Civilization', with special reference to its (1) ethnic types, (2) cultural affinities, (3) local extent, (4) material culture with their sequences, (5) religious symbols and beliefs, (6) disposal of the dead, and (7) its relation, if any, with other contemporary, antecedent, or subsequent cultures in India or other countries.
2. Give an account of the origin and development of culture in India and Western Asia from the earliest beginnings down to 3000 B.C., and discuss the claim of India to be the cradle of civilization.
3. Give an account of the origin and history of megalithic culture in India, its distribution and varieties in prehistoric and historic (including modern) periods, and the contents and builders of different kinds of megalithic structures.

4. Give an account of protohistoric and prehistoric potteries and terra-cottas of India, their technique, decorations and designs, sequence, distribution, and probable manufacturers, and their points of resemblance with the potteries and terra-cottas of contemporaneous peoples of Western Asia.

## SECOND HALF

*Only THREE questions are to be attempted*

1. Describe briefly the Early Iron Age cultures in Europe.
2. Write a note on the typology and distribution of copper implements in India.
3. Write a short essay on Late Palæolithic Art.
4. Write short notes on *any three* of the following : Aunjetitz, Robenhausen, Anau, Susa, Campignian, Beaker-folk.
5. Give a short description of the Bronze Age culture either of Crete or of Central Europe.

## EIGHTH PAPER

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE of the following questions*

1. Compare the social organization of the Ao Nagas of Assam with that of the Birhors of Chota Nagpur. Indicate the functions of each of these social divisions.
2. Discuss the different types of land tenure found among the Ao Nagas. How far is private ownership in land and movables recognized by them ?
3. What do you think to be the real cause of head-hunting formerly practised by the Ao Nagas ? Discuss the effects of its abolition.
4. Classify the deities and spirits recognized by the Birhors, with short notes to indicate their nature and character.
5. Show how far totemism has affected the social and religious life of the Birhors.

### SECOND HALF

*Only THREE questions are to be attempted*

1. What is the classificatory system of relationship ? Illustrate it, if possible, with Indian examples.
2. What is hypergamy ? Discuss its origin and developments in India.
3. Discuss, with Indian examples if possible, the origin of polyandry.
4. What is totemism ? Give examples of totemic clans from India.
5. Write short notes on *any three* :—  
Andamanese, Toda, Vedda, Brahui, Khasi, Garo.
6. Give, with examples from India, a short description of animistic beliefs and rituals.

## ECONOMICS

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 „ C. D. THOMSON, M.A.

## FIRST PAPER

(GENERAL PRINCIPLES OF ECONOMICS)

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. 'The static theory of equilibrium is not wholly applicable to commodities which obey the law of increasing return.' Comment on this proposition.

2. How far is it true to say that the free-play self interest will automatically cause the productive resources of any country to be so distributed as to yield a larger output and, therefore, more economic welfare than would be attained by any arrangement other than that which comes about naturally?

3. 'The prestige of the Purchasing Power Parity Theory, as being something more than a truism, has depended, not so much on the somewhat crude theory underlying it as on the supposed verifications which have followed from applying it to some of the most familiar national index numbers.' Examine this statement, and indicate the limitations of the Purchasing Power Parity Theory.

4. 'An inflation of the currency cannot increase the product of farms and factories, nor the speed of freight train or ships. The stream of business depends on natural resources and technical conditions, not on the quantity of money.' (Fisher.)

Can you reconcile the above view with the scheme of inflation recently adopted in America to deal with the present crisis?

5. What is meant by the International gold standard? What are the conditions which are essential for its successful working?

6. How can the Central Bank of a country control the reserve resources of member banks?

## SECOND HALF

*Answer ANY THREE questions*

1. Is the utility theory of value based, in your opinion, (a) on an unsound psychology, or (b) on a faulty logic? Discuss either (a) or (b).

2. Expound carefully the marginal productivity theory of distribution. How would you apply the theory for determining rent or profit?

3. Examine critically if Taussig's theory of wages as the discounted marginal product of labour can be distinguished substantially from the residual theory of wages.

4. Do you think Marshall's concept of Representative Firm indispensable in the theory of value? Give reasons for your answer.

5. Is there any valid reason for distinguishing between the marginal social net product and the marginal private net product?

6. Discuss the effects on the national dividend of the fact of, and of the expectation of transferences from the relatively rich to the relatively poor.

## SECOND PAPER

(GENERAL PRINCIPLES OF POLITICAL SCIENCE)

*The questions are of equal value*

*Answer THREE questions in EACH half*

### FIRST HALF

1. 'Will and not force is the basis of the State.' Amplify.

What objections have been taken against this doctrine, and how does Green answer them?

2. (a) 'A nation is a body of people united by a corporate sentiment of peculiar intensity, intimacy, and dignity related to a definite home country.' Explain.

(b) 'The theory of nationality is a retrograde step in history.' Do you agree?

3. Give a critical estimate of Athenian Liberty.
4. Write a short essay on—

*either,*

Evolution and Progress;

*or,*

Internationalism as an ideal in Political Science.

5. Discuss the grounds on which the institution of private property has been attempted to be justified.

### SECOND HALF

1. To what extent is Greek political speculation influential in this age?
2. What, in your opinion, are the fundamental conditions of the successful working of democratic institutions?
3. 'If anarchy means the withdrawal of legal control acting through State power, the door is opened to the rule of mere force.' Develop this statement, and explain how the philosophy of anarchy gets its strength in some countries.
4. 'We may say generally that the gradual establishment of the masses in power is of the blackest omen for all legislation founded on scientific opinion, which requires tension of mind to understand it and self-denial to submit to it.' Comment on this view of Sir Henry Maine.
5. 'The discredit of the State is a sign that the pluralistic conception has come into existence.' Explain.

### THIRD PAPER

(PUBLIC ADMINISTRATION)

*The questions are of equal value*

*THREE questions only are to be attempted from EACH half*

### FIRST HALF

1. What is Dominion Status?  
Discuss the arguments for and against a Dominion Status for India.
2. Describe the functions and powers of the Secretary of State for India in Council.  
To what extent, in your opinion, will the continuance of these powers be compatible with the growth of responsible government in the country?
3. Discuss the restrictions and limitations on the powers of the Central Legislature of India under the present Constitution.
4. Examine the position and powers of the Ministers in a Governor's Province in India.  
Discuss their relations with the Governor and with the Executive Council.
5. Briefly describe the judicial system of India. Discuss the exemptions from the jurisdiction of the law courts under the present constitution.

## SECOND HALF

1. What are the sources of the English constitution? What is the sanction by which obedience to the conventions of the constitution is at bottom enforced?

2. 'England is a country governed, as is scarcely any other part of Europe, under the rule of law.' What is meant by this statement?

Examine, in this connexion, the following statement:—

'The distinction between England and those countries where the *droit administratif* obtains has unquestionably diminished.' (Marriott.)

3. 'The choice for the modern world lies not between absolutism and democracy, but between different types of democracy.' (Marriott). What does the author mean by this statement? What are your own views regarding it? Which type of democracy do you prefer? Give reasons for your answers.

4. Describe the legislative powers of the Reichstag under the existing German constitution. To what extent are these powers limited by the powers assigned to the President of the Republic and the people?

5. Describe in brief the main differences in the Dominion constitutions of Canada, Australia, and South Africa.

## FOURTH PAPER

## (PUBLIC FINANCE)

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. 'Just as a differential tax tends to be a confiscation of values for present owners, so a differential exemption or privilege tends to be a bonus to present owners.' Elucidate this proposition, and point out the limitations to the theory of capitalization of taxes.

2. Discuss the economic objections to a sale's tax.

3. Analyze the concept of taxable capacity as applied (a) to a single country, and (b) to two or more countries relatively to one another.

4. Would you advocate the exemption from local taxation of public utility industries owned and operated by municipalities? State reasons for your answer.

5. Compare the merits of the different methods of debt redemption.

## SECOND HALF

*Answer ANY THREE questions*

1. Discuss the limitations on the borrowing powers of the Provincial governments in India.

2. Critically examine the various methods that have been suggested for the allocation of the proceeds of the Indian-income-tax between the Provinces and the Central government.

3. Examine the extent of the financial powers possessed by the Central legislature of India.

4. Describe the duties of the Finance Department in a Governor's Province in India.

5. Trace briefly the history of the Indian Income Tax.

## FIFTH PAPER

*The questions are of equal value*

## FIRST HALF

*Attempt only THREE questions*

1. 'Within the 10 years that immediately followed the Permanent Settlement a complete *revolution* took place in the constitution and ownership of the estates which formed the subject of that Settlement.'

Describe the nature and causes of this *revolution*. What remedial measures were adopted by the E. I. Company, and with what results, to stop the further progress of this revolution?

2. Indicate the character and status of the *Zemindars* before the Permanent Settlement.

It is said that Lord Cornwallis introduced into Bengal an imitation of the European system of landed property. But in this he was mistaken.

Discuss this.

3. Suggest the causes of the emergence of various grades of subinfeudation in the land revenue system of Bengal. Discuss their social and economic effects.

4. Would you regard the imposition of an income tax on agricultural income as a violation of the pledge given at the time of the introduction of the Permanent Settlement of land revenue in Bengal?

5. Describe the economic incidents of the following tenures :—

(a) *Pattani* tenure.

(b) *Utbandi* tenure.

(c) *Ghatwali* tenure.

(d) *Mukarari* tenure.

## SECOND HALF

## (INDUSTRIAL DEVELOPMENT)

*Answer ANY THREE questions*

1. Analyze the main features of the present policy of Government stores purchase in India. What, in your view, are its advantages and limitations?

2. Indicate in brief the post-war changes in the external competition in the cotton piece-goods trade of India, and discuss how far they are responsible for the present state of the cotton industry.

3. Examine the comparative advantages and disadvantages of the Indian sugar industry. What lines of reorganization would you suggest for its permanent improvement?

4. Indicate the extent and nature of the employment of Indian women in factories and mines. How far, in your view, are the existing provisions of Indian labour legislation adequate for the protection of women?

5. Describe in detail the housing conditions of factory labour in Bombay. What are their effects on health and family life?



## (GROUP A)

## (HISTORY OF ECONOMIC THOUGHT)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Discuss Aristotle's criticism of Plato's Communism.
2. 'Ricardo has proved a false prophet and mistaken apostle.'  
Discuss this statement.
3. Explain briefly but clearly the special features of Socialistic thought during the nineteenth century.
4. Explain what is meant by the relativity of economic doctrines. Mention some of its chief exponents, and illustrate it with special reference to the economic history of England.
5. 'Pure economics, so much decried since the days of Ricardo, has once more justified its claim to a position of honour, and despite keen opposition it is attracting attention everywhere.'  
What do you think of this statement? Give reasons for your answer.

## SECOND HALF

*Answer ANY THREE questions*

1. Account for the widespread revival of the enclosure movement in England during the latter half of the eighteenth century and examine its economic effects. Would you advocate a similar movement in India at the present time?
2. Give an account of the factory laws in England from 1802-1844. How far were they opposed to the general trend of the legislation of that age?
3. 'The Industrial Revolution supplied the necessity and Robert Owen the inspiration of the British Co-operative Movement.' (Fay.)  
Discuss this statement, and trace the history of the movement down to 1900.
4. Examine the significance of the issues involved in (a) Taff Vale case, and (b) Osborne case. To what extent have judicial decisions in these cases been modified by subsequent legislation in England?
5. Describe the part played by (a) Huskisson, (b) Cobden, and (c) Gladstone, in the reform of commercial policy in England.

## (GROUP B)

## (HISTORY OF POLITICAL THOUGHT)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Explain and criticize the principles of education laid down by Plato in his 'Republic.' How far have they been accepted in the modern age?

2. Compare Plato's ideas on the following with modern thought :  
(a) origin and ends of the State, (b) rights and duties of women, (c) province of legislation, (d) treatment of enemies.

3. Comment on *any four* of the following :—

- (a) 'The philosopher is a lover not of a part of wisdom but of the whole.'  
(*'Republic.'*)
- (b) 'Temperance is the ordering or controlling of certain pleasures and desires.'  
(*'Republic.'*)
- (c) '..... it is a mean or compromise between the best of all which is to do injustice and not be punished and the worst of all which is to suffer injustice without the power of retaliation.'  
(*'Republic.'*)
- (d) 'Education should be based on three principles—the mean, the possible, the becoming.....'  
(*'Politics.'*)
- (e) 'Money was intended to be used in exchange but not to increase at interest.'  
(*'Politics.'*)
- (f) 'Virtue must be the serious care of a State which truly deserves the name.'  
(*'Politics.'*)

4. What, according to Aristotle, are the causes of revolutions ? How far do they operate in the modern world ? Illustrate your answer from the history of any revolution in the modern age.

5. Indicate briefly the ideas underlying the political institutions of Rome from the earliest times down to the fall of the Roman Empire.

Or,

Trace the influence of Stoic thought on later political theory.

## SECOND HALF

*Answer ANY THREE questions*

1. Trace the history of the doctrine of Contract during the middle ages. Explain the purposes the theory was made to serve during the period.

2. Indicate briefly the political thought that arose in England during the Puritan Revolution.

3. How far was English political thought in the eighteenth century influenced by Rousseau ?

4. Summarize the political thought of the French Revolution. What are the factors that influenced the political theory of the period ?

5. Explain fully the nature of post-Hegelian political thought in Germany in the nineteenth century. Notice briefly the factors that led to its development.

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(GROUP A)

(MATHEMATICAL ECONOMICS)

SEVENTH PAPER

*The questions are of equal value*

*Only THREE questions to be attempted from EACH half*

FIRST HALF

1. Analyze carefully the various conditions that are implied in the terms, competition, perfect competition, and unlimited competition.

Which of these conditions do you consider essential for a determinate position of equilibrium, and why ?

2. Explain how you would proceed to estimate the probable increment of the price of a commodity on the imposition of a tax upon it. Indicate precisely what data you require and what assumptions you make.
3. Investigate, after Edgeworth, the short-period effect of taxes and bounties on exports upon the net advantages of foreign trade.
4. Explain why an increase in the general cost of production tends to raise the selling price of a commodity. Do you notice any difference between the cases of a monopolized product and a competitive one?
5. Does the law of joint-cost apply to the railway industry? Point out the different senses in which the term is used and analyze the various conditions under which the law operates.

## SECOND HALF

1. Let the demand curve for a certain commodity be

$$p = \frac{600}{q-1},$$

where  $p$  = price in annas and  $q$  = quantity demanded in seers.

The producer has a monopoly. He has a fixed over-head charge of Rs 9,000 and a constant prime cost of 10as. per seer. At what price will he sell, and what will be his profit? If the Government were to monopolize the commodity, at what price would it probably sell, if it considered both its revenue and the interests of the consumers?

2. The function of utility

$$U = x^2 y^3 z^4,$$

where  $U$  = total utility,  
 $x$  = mds. of wheat,  
 $y$  = yards of cloth, and  
 $z$  = rupees. is assumed to hold good for three traders  $A$ ,  $B$  and  $C$ .

$A$  comes to market with 20 mds. of wheat,  $B$  comes with 240 yards of cloth, and  $C$  with 40 rupees. The competition is free and fair; there is no combination or concealment, or attempt to monopolize. How much will each sell to the others? How much will he keep for himself? Which of the three will be the richest when they stop trading?

3. A lumberman buys a piece of land and plants a forest. He expects the value of the trees to increase as they grow, so that  $v = kr^n$ ,

where  $v$  = value of the forest,  $x$  = time in years,  $0 < n < 1$ . If he knows the rate of interest at which he can borrow over a long period of years, how much can he pay for the land, and how often should he cut the forest to secure the greatest profit?

4. Successive units of labour and capital yield the following amounts on land of a certain fertility.

	Additional yield.	Total yield.
1st unit	60 Mds.	60 Mds.
2nd "	55 "	115 "
3rd "	50 "	165 "
4th "	45 "	210 "
5th "	40 "	250 "
6th "	35 "	285 "
7th "	30 "	315 "
8th "	25 "	340 "
9th "	20 "	360 "

A unit of labour and capital costs Rs. 60 in money plus 15 mds. in grain. There are three pieces of land all of this same size and fertility, but

situated at different distances from the city market, so that the prices of grain at the three farms are Rs. 4, Rs. 8, and Rs. 2. Calculate the surplus produce of the three farms in money and in grain.

5. Prove that the lowest point of the average cost curve lies on the marginal cost curve. Under what circumstances does price follow the average cost curve, if at all?

## EIGHTH PAPER

*The questions are of equal value*

*Only THREE questions to be attempted from EACH half*

### FIRST HALF

1. Distinguish carefully between Marshall's Representative Firm and Pigou's Equilibrium Firm. Which do you think to be more useful, and why?

2. 'When we speak without qualification of laws of increasing, constant or decreasing, supply price, we have in view the relation between variations in the output of a commodity and variations in the supply price per unit from the standpoint of the industry producing the commodity. These variations are not always or necessarily the same as the variations in the supply price per unit of the commodity from the standpoint of the community.' (Pigou.)

Discuss the statement.

3. Examine Jevons' Theory of Interest in the light of the modern theory of marginal productivity.

4. Explain how an integral demand curve is related to Edgeworth's constant utility curves.

5. Point out the nature of the assumptions on which the marginal productivity theory of distribution is based. Do the prevailing conditions of production substantially conform to these assumptions?

### SECOND HALF

1. Examine the main factors that affect the average volume of the national dividend.

2. Analyze the hindrances to equality of marginal net products due to imperfect divisibility of the units in terms of which transactions are conducted.

3. Examine and criticize, after Pigou, Hobson's view that inventions do not always cause more labour to be employed in the industry where they are introduced.

4. Discuss whether the relation between capital and labour in general is, in the concrete, mainly co-operant or mainly river.

5. Examine the advantages of the method of measuring elasticities of demand, the basis of which is a comparison of the amounts of a commodity consumed by persons of different incomes at a given price, instead of a comparison of the amounts consumed by persons of given incomes at different prices.

## (GROUP A)

## (MODERN ECONOMIC DEVELOPMENT)

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Point out the chief obstacles to England's agricultural improvement prior to the Agrarian Revolution, and indicate the steps by which they were gradually removed.
2. Explain the circumstances that led to the growth of the Trust movement in the United States, and point out the steps by which the American Government have sought to check its evils.
3. Trace the evolution of the labour movement in India, and account for the causes of its slow growth and comparative weakness.
4. What do you consider to be the special features of agriculture in Japan?
5. 'The decade preceding the war was exceedingly fruitful in measures looking toward social amelioration in general and the extension of working men's insurance in particular.' Discuss.

## SECOND HALF

*Answer ANY THREE questions*

1. Account for the phenomenal development of German industries since 1871.
2. What was the influence of corn laws upon British agriculture? Indicate the circumstances that led to the repeal of the corn laws in Great Britain.
3. What are the circumstances which have produced a reversal of the policy of free trade in Great Britain? Would Imperial reciprocity improve the foreign trade of the country permanently?
4. Trace the growth of the cotton mill industry in India. Is a protection policy necessary for its further development?
5. State the circumstances under which the policy of discriminating protection has been adopted in India. Examine its effects on Indian industries.

## EIGHTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Discuss the chief phases of the Free Trade movement in Great Britain during the period 1820-1849, and indicate the factors favouring that movement.
2. Show how the triumph of the Factory System provided conditions necessary for the rise of Trade Unionism ; and indicate how by the year 1824-25 the early legal obstacles to Trade Unionism were overcome.

3. Show why from the Revolution to the present-day France has remained a predominantly agricultural country, and also a land of numerous and small holdings.

4. Discuss the grounds of the proposals which were advanced in India in the course of the sixties of the last century for the extension of the Permanent Settlement over the greater part of the country. Account for the failure of these proposals.

5. Examine the main tendencies of Tariff-making and commercial policy in Europe during the post-war period.

## SECOND HALF

*Answer ANY THREE questions*

1. 'Russia has experienced a decided industrial revival since the adoption of the retreat from orthodox communism to State capitalism.' Elucidate this proposition fully.

2. Examine the part played by State help in the development of Japanese shipping and railways.

3. Trace the main stages of the development of the Gold Exchange Standard in India, and examine the merits of that system in the light of Indian experience.

4. Give a short account of the salient features of Labour legislation in Europe since the War, and indicate the character of the work of the International Labour Office.

5. Indicate the reasons that have led to the growth of industrial combinations in Germany. In what industries particularly are these combinations prominent, and why?

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## (GROUP A)

### (BANKING AND CURRENCY)

#### SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. What was the position of the Bank of England in the British banking system in pre-war days? To what extent has that position been modified by post-war developments?

2. Indicate how the Federal Reserve System has helped to develop (a) the market for commercial paper, and (b) for bank acceptances.

3. Discuss the following statement: 'The whole conception of bankers "creating credit" is confused and fallacious.' (Cannan.)

4. Account for the increasing tendency towards the fusion of investment and commercial banking.

5. Discuss the merits and dangers of Central Banks undertaking (a) ordinary banking business, (b) Government finance.

## SECOND HALF

• Answer ANY THREE questions

1. Discuss the position of the Foreign Exchange Banks in the Indian Banking system. Is it feasible to start an Indian Exchange Bank ?
2. Is it desirable to adopt the proportional reserve system for the proposed Indian Reserve Bank ?
3. Why has the Bank of International Settlements been started ? What practical advantages have already been secured out of its working ?
4. What is meant by the expression 'world's financial leadership' ? Discuss the respective potentialities of London, Paris, or New York becoming the world's financial leader.
5. The French banking system has been dubbed as the most 'antediluvian'. Comment on the above statement, and point out how far the Indian banking system can benefit from French experience.

## EIGHTH PAPER

*The questions are of equal value*

## FIRST HALF

Answer ANY THREE questions

1. What conditions must be fulfilled if the gold standard is to be restored in England in the near future ? Do you think it will be easier to adopt the tabular standard ?
2. Do you agree that the 'rate of saving' and the 'rate of investment' should appear as terms in the equation connecting the chief factors governing the value of money ? How far does such an equation help in formulating the banking policy for controlling the price level ?
3. 'Discount rate manipulation and sales and purchases of securities are complementary, and not contradictory, policies' Discuss this statement.
4. What, in your opinion, are the chief causes of the present depression ? What measures, if any, may be adopted to mitigate the depression in India ?
5. What do you understand by (a) a 'forward' rate, and (b) a 'long' rate, of exchange ? Give the main factors on which each is based.

## SECOND HALF

Answer ANY THREE questions

1. Give an account of the various schemes adopted or put forward to introduce gold in the currency system of India during 1835-1873.
2. Indicate the different methods by which elasticity is provided in the Indian currency system. Are these methods adequate ?
3. In what circumstances can a country link its currency with a foreign currency ? Consider the advantages that follow from such linking. Illustrate your answer from the case of India.
4. What are the reasons which led the Hilton Young Commission to recommend the demonetization of gold sovereigns in India ?
5. Discuss the composition and functions of the Indian paper currency reserve. Justify or criticise the policy involved in the establishment of a separate gold standard reserve for India.

## (GROUP A)

## (INTERNATIONAL TRADE—FIRST PAPER)

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Indicate the factors influencing the elasticity of a nation's demand for its imports, and show how this elasticity affects the terms of international exchange.

2. 'While international trade is not likely to be modified by the alignment of non-competing groups within a country, peculiarities in that alignment may affect international trade'.

Discuss this, and illustrate it from economic history.

3. Examine the effect of an improvement in the production of an article of export from a country upon the terms of its exchange for foreign goods. Do you think that such an improvement might prove detrimental to the exporting country?

4. 'The exports of privately-owned gold and the maintenance of the link between sterling and the rupee have been of the highest advantage to India.' Comment on this statement.

5. If a country were to impose a general tariff on its imports, how would it affect (a) its foreign exchanges, (b) its general price level, and (c) the barter terms of trade?

## SECOND HALF

*Answer ANY THREE questions*

1. 'The range of incomes and prices prevailing in a country depends upon the efficiency of its productive factors in producing for the international market.' Discuss this statement.

2. Describe in detail the stages by which international loans are ultimately transferred in the form of goods and services.

3. 'Unrestricted trade between a manufacturing and a raw material producing country is disadvantageous to the latter. For while the former's exports enjoy the benefit of diminishing cost or increasing return, the exports of the latter are subject to increasing cost or diminishing return.' Discuss this statement.

4. Examine carefully the conditions under which it is feasible to tax the foreigner (a) by general import or export duties, and (b) by import or export duties on particular commodities. Do these conditions prevail in the case of India?

5. Describe the working, and indicate the importance, of forward exchanges. What are the factors which make the 'spot' and 'forward' rates differ from each other?

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## (INTERNATIONAL TRADE—SECOND PAPER)

## EIGHTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. 'Protection and preferential trade, though often treated as two halves of the same policy, are distinct policies and may in practice be inconsistent policies.'

Critically examine the above statement.

2. How far is it true to say that tariffs facilitate rationalization and thus reduce domestic costs of production?

3. Critically examine the main provisions of the Ottawa trade agreement between the United Kingdom and India.

4. On what grounds has it been held that the passing of the Tariff Act of 1928 was one of the most momentous events in the history of the U.S.A.? Trace the course of tariff legislation in the U.S.A. from 1828 to the outbreak of the Civil War.

5. Examine the merits of some of the devices that are usually adopted to minimize the evils of a system of protective duties.

## SECOND HALF

*Answer ANY THREE questions*

1. Briefly describe the merits and drawbacks of export duties as an instrument of (a) revenue, (b) protection, and (c) preference.

2. Describe the course of the post-war tariff legislation in Germany.

3. 'Much of protectionism is an attempt to cancel natural advantages.'

Critically examine this statement with reference to the effect of the policy of protection on the development of industries in the U.S.A.

4. Is it possible to correct the disequilibrium in a country's balance of payment by means of a general import duty?

5. How far can a policy of protection solve the problem of unemployment in a country?

## (STATISTICS—FIRST PAPER)

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Explain what is meant by a 'frequency distribution', and state how you would proceed to compile the distribution from any given data. Describe the common faults of presentation which should be avoided.

Discuss the statement: 'Think in terms of frequency distributions, not of averages.'

2. Define the 'geometric mean' and describe its uses in Statistics. When is this to be preferred to other types of averages?

3. Explain what is meant by two attributes being 'associated'; give two tests of association and indicate the principal properties of the association table.

4. Estimate the correlation coefficient between girth and height from the following data :—

Height in inches.	No. of instances.	Girth in inches.
60	2	32.7
61	7	33.6
62	9	33.5
63	14	34.2
64	18	34.1
65	14	34.7
66	14	34.7
67	12	35.0
68	10	35.1
69	7	35.5
70	3	36.3

110

5. Describe and discuss the methods available for investigating the relation between two quantities varying with time.

## SECOND HALF

Answer ANY THREE questions

1. Find out the number of persons whose earning exceeds Rs. 15 but does not exceed Rs. 16 from the following data :—

Earnings up to	No. of persons
Rs.15	103
Rs.20	347
Rs.25	540
Rs.30	666
Rs.35	711

2. Explain what is meant by a weighted arithmetic mean, giving illustrations of its use in connection with index numbers of prices.

Show that  $M_w = M + \frac{r \sigma_x \sigma_w}{\omega}$ , where

$M_w$  = the weighted arithmetic mean of  $X$ ;

$M$  = the arithmetic mean of  $X$ ;

$\sigma_x$  = the standard deviation of  $X$ ;

$\sigma_w$  = the standard deviation of the weights;

$\omega$  = the mean of the weights;

$r$  = the coefficient of correlation between  $X$  and  $\omega$ .

In the light of this formula, comment on the dictum, 'Weighting usually has little effect'.

3. Explain what is meant by the method of moments for fitting theoretical curves to actual distributions, and show how the moments of the distribution about the mean are calculated. Find out the first three moments about the mean of the following distribution :—

Values.	Frequencies.
1	6
2	36
3	52
4	95
5	123
6	87
7	66
8	28
9	7

500

4. What do you mean by the 'standard error' of a statistical constant? State carefully the conditions assumed, and explain how these limit the value of the 'standard error' as a general measure of 'trustworthiness'.

Find out if there is any significant difference between the means  $M_1, M_2$  below,  $\sigma_1$  and  $\sigma_2$  being the respective standard deviations and  $N_1, N_2$  the numbers of observations:—

$$M_1 = 41.3; \sigma_1 = 3.3; N_1 = 100,$$

$$M_2 = 38.9; \sigma_2 = 3.2; N_2 = 64.$$

5. Write a short essay on the 'Moving Average' and its application in Statistics.

### (STATISTICS—SECOND PAPER)

#### EIGHTH PAPER

*Only THREE questions are to be attempted from EACH half*

#### FIRST HALF

1. Explain what you mean by two attributes being independent, positively associated, or negatively associated.

Show, as briefly as possible, whether  $A$  and  $B$  are independent, positively associated, or negatively associated in each of the following cases :—

- (a)  $N=5000$  ( $A$ )=2350 ( $B$ )=3100 ( $AB$ )=1600  
 (b) ( $A$ )=490 ( $AB$ )=294 ( $\alpha$ )=570 ( $\alpha B$ )=880  
 (c) ( $AB$ )=256 ( $\alpha B$ )=768 ( $AB$ )=48 ( $\alpha\beta$ )=144

2. A province is divided into three districts  $A, B$  and  $C$ . The enumerated populations of the province and the districts for two census years are given in the following table :—

(Population in lacs.)

		Province.	A.	B.	C.
1921	...	35	10	12	13
1931	...	50	11	15	24

The estimated population of the province for 1927 is 44 lacs. Estimate the population of the three districts for the year 1927, giving a brief explanation of the method of estimation

3. Explain the need for *standardizing death rates*. Give some method of finding the *standardized death rate*, and discuss the significance of the result obtained.

4. How would you show statistically that expenditure on public work is no cure for unemployment so far as the State is concerned?

5. If you were asked to compare the intensity of the recent economic depression in India with that in Great Britain and the United States what statistics would you collect and correlate in this connexion?

## SECOND HALF

1. Describe the main principles underlying the theory of logistic curves for population growth. Indicate the difficulties in applying this theory in the case of India.

2. What is the significance of the ratio  $\frac{\text{Import Price Index}}{\text{Export Price Index}}$  for a given country? The following table gives this ratio worked out in the case of India for the years 1925-27 :—

(Base Year—1913)				
Year	...	1925	1926	1927
Ratio	...	1.03	1.12	1.02

Explain the significance of these figures with special reference to Great Britain.

3. 'We have already taken occasion to remark on the absence of reliable and scientifically constructed statistics of prices and wages, and to recommend that these should be improved. The possession and utilization of a reliable and reasonably complete body of statistical data is an essential of a sound currency system'. (*Royal Commission on Indian Currency and Finance*, 1926.)

Discuss the need for better statistics in India, especially of wages, and outline briefly the measures you would advocate to improve economic statistics at present collected by Government.

4. What are the most important statistical points in the construction of an index number of wholesale prices?

Illustrate your answer with reference to the construction of any index number of Indian wholesale prices with which you are acquainted, and of the British Board of Trade index number or the Economist index number.

5. Describe, in some detail, the main changes introduced in the census of India, 1931.

## (GROUP B)

### (COMPARATIVE POLITICS—FIRST PAPER)

#### SEVENTH PAPER

*The questions are of equal value*

*Attempt SIX questions in all : THREE from EACH half*

#### FIRST HALF

1. 'If nations were subject to the same unjust resentment, as human beings, France might dislike England for the very reason of having imported an institution modelled on one of hers, and of having found it a failure.' (*Bodley*.) Discuss.

2. What is the exact relationship between the Quirinal and the Vatican in Italy? How does it affect (i) local politics, (ii) international policy of Italy?

3. 'The underlying principle of the whole structure of the Soviet system is the *union of functions*. It conflicts entirely with the principle of political democracy and with that of parliamentary deliberative institutions.' (Graham.) Discuss.

4. How can the constitutions of the following countries be legally amended?—

(1) The Irish Free State, (2) India, (3) Ceylon, (4) Australia.

5. How far does the judicial committee of the Privy Council stand as the symbol of the unity of the British Empire?

6. Attempt a critical estimate of the working of (i) the Referendum, (ii) the Initiative in the Swiss Constitution. Could these 'democratic devices' be successfully worked in England?

## SECOND HALF

1. 'The merits of the British Constitution are closely related to its fundamental elasticity.' (Keith) Discuss this with special reference to recent constitutional developments in England.

2. Discuss the centrifugal and centripetal elements that have influenced the new constitution of the German Reich. How far do recent developments confirm your views?

3. 'The United States of America is said to possess the most completely federal constitution in the world, Canada the least.' (Strong.) Explain why.

4. It is said that the American President 'is a reduced, but improved, copy of the English Sovereign.' Elucidate this statement.

5. What do you understand by 'Fundamental Rights'? How have these been secured in England, France, Germany, and the United States of America?

6. Attempt a critical estimate of the type of Federation to which the proposals of the White Paper on India conform.

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## (COMPARATIVE POLITICS—SECOND PAPER)

### EIGHTH PAPER

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE questions*

1. Compare the constitutional significance of the oldest popular assemblies of the Greeks, the Romans, and the Teutons. Does the oldest Vedic polity offer any parallel instance?

2. 'Maine's Patriarchal Theory in its final form has undergone a material change.' Do you agree? How far in your view is this theory sufficient to explain the origin of primitive kingship?

3. Consider the propriety, or otherwise, of the following institutions of democratic Athens: (a) election by lot, (b) payment for state-services, and (c) state distribution to the citizens. Consider in this connexion the Athenian method of legislation.

4. Examine Maine's view of the development of the parallel concepts of *Jus Gentium* and *Jus Naturale*, and estimate their influence upon the growth of Roman Law.

5. 'Hindu kingship was a trust.' Discuss this dictum in the light of (a) the Vedic, and (b) the post-Vedic, evidence.

## SECOND HALF

Answer ANY THREE questions.

1. Examine the different instances of Pan-Hellenic nationalism attempted in Greece from the view-point of federal government.

2. Discuss the problem of citizenship in republican Rome in its bearings on constitutional development down to *circa* 200 B.C.

3. Appraise the contributions of feudalism to the mediæval European constitutions, and indicate some of its distinctive tendencies.

4. Describe the mediæval Italian State with reference to (a) social classes, (b) political parties, and (c) administrative system.

5. Analyze the economic and political functions of guilds in Hindu India.

## (INTERNATIONAL LAW—FIRST PAPER)

### SEVENTH PAPER

*The questions are of equal value*

Attempt SIX questions in all : THREE from EACH half

*Credit will be given for illustrating answers with reference to leading cases*

### FIRST HALF

1. Assess the debt of International Law to :—

- (a) Grotius's *De Jure Belli ac Pacis*.
- (b) Ayala's *De Jure et officiis Bellicis*.
- (c) The Treaty of Paris, 1856.
- (d) The Conference at Washington, 1921.

2. What is the status of the following in International Law?—

- (a) Palestine, (b) Canada, (c) Egypt, (d) the Papacy.

3. Discuss the law relating to aerial navigation.

4. What do you mean by 'diplomatic immunities'? How far do (a) ambassadors, (b) consuls, enjoy such immunities?

5. Write notes on any four of the following :—

- (a) *Porter v. Freudenberg*.
- (b) *The Huascar*.
- (c) *The Hoop*.
- (d) *In re Castioni*.
- (e) *The Knight Commander*.

## SECOND HALF

1. Write a short note on the achievements and failures of the Second Hague Conference, 1907.

2. Discuss the doctrine of *rebus sic stantibus* on Treaties. How far does war affect treaties to which the belligerents only are parties?

3. What methods short of war are known to International Law whereby disputes and differences between States may be adjusted? Illustrate how far these methods are effective

4. Discuss the exact limits of the jurisdiction exercisable by the International Court of Justice.

5. Write notes on *any four* of the following :—

(a) Recognition of belligerency and recognition of insurgency.

(b) Protectorates and mandatory territories.

(c) The Suez Canal and the Panama Canal

(d) Requisitions, contributions, and fines.

(e) Levies en masse.

(f) The sanctions of the laws of war.

## (INTERNATIONAL LAW SECOND PAPER)

## EIGHTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Indicate the changes in the conception of Neutrality brought about by the Covenant of the League of Nations. What will be the position of non-participating memberstates of the League in case of a League-war?

2. Give a clear exposition of the provisions of the Hague Convention in respect to contributions and requisitions. Is a belligerent justified in imposing collective fines upon the population of occupied districts?

3. Write notes on *any two* of the following :—

(1) Humanisation of submarines.

(2) Bacteriological warfare

(3) International servitudes.

(4) The right of innocent passage.

(5) The doctrine of ultimate consumption.

4. Write a full note on the criminal jurisdiction of a State over foreigners. To what extent is a State responsible for injuries caused to foreigners by the operations of a civil war taking place in its territory?

5. Discuss the rules of International law concerning the admission of belligerent warships to neutral ports. To what extent are those rules applicable to submarines?

## SECOND HALF

*Answer ANY THREE questions*

1. Professor Holland remarks : 'The law of nations is but private law writ large.' Fully develop and criticize the idea.

2. Write critical notes on the following passages :—

(a) ' War then is a relation, not between man and man, but between State and State.....' *Rousseau's 'Social Contract'.*

(b) 'It (international law) is the vanishing point of jurisprudence .....' (*Holland's 'Jurisprudence'.*)

3. Indicate the legal character of military occupation. How does it affect the sovereignty of the occupied State? Illustrate your answer.

4. How are persons invested with enemy character? Illustrate your answer and discuss Lord Stowell's views on the question.

5. Discuss *any three* of the following with reference to leading cases wherever possible :—

(a) ' Free ships free goods, enemy ships enemy goods.'

(b) Doctrine of continuous voyage.

(c) Drago's doctrine.

(d) Disarmament in the twentieth century.

### (SOCIOLOGY—FIRST PAPER)

#### SEVENTH PAPER

*The questions are of equal value*

#### FIRST HALF

*Answer ANY THREE questions*

1. (a) What do you mean by growth rates? Describe broadly the changes in the population of India with reference to (1) the Mussalmans, and (2) the tribes.

(b) Write notes on *any three* : (1) Children's Acts, (2) Internal colonization in India, (3) Indeterminate sentence, (4) Social service activities of the Calcutta Corporation, (5) Immigration legislation in the U.S.A., (6) Types of criminals, (7) Vocational schools.

2. (a) Discuss the occupational statistics of India in order to throw light on her economic condition.

(b) Point out the principal landmarks in the British method of handling poverty and give an account of the present system.

3. (a) Describe with reference to European experience in what manner you would proceed to introduce social assurance in India.

(b) Estimate the bearings on crime (1) of literacy, (2) of economic condition and (3) of race.

4. (a) How is it possible to control diseases? Illustrate your answer with examples from Europe.

(b) How far are the working men in Indian mines and factories protected by laws?

5. (a) Write short estimates of *any four* : (1) Bonger, (2) Tarde, (3) Gumplowicz, (4) Vivekananda, (5) Ward, (6) Syed Ahmed, (7) Wallas.

(b) Is literacy an aid to the growth of personality? Discuss in this connection the illiteracy and primary education statistics of Italy, Russia and Bengal.



## SECOND HALF

*Answer ANY THREE questions*

1. What are Mother-sibs? Discuss the various theories relating to the chronological relationship between Mother-sibs and Father-sibs.

2. Examine some of the institutions of primitive tribes bearing upon crime and punishment.

3. (a) Write a note on the internal structure and the communal organization of the Santal tribe in India.

(b) Give an account of the various forms of marriage recognized by the Santals.

4. What is totemism? To what extent does it prevail among the aboriginal tribes of India?

5. Write notes on any two of the following :—

- (1) Junior, right.
- (2) Sororate.
- (3) Endogamy.
- (4) Group-marriage.

## (SOCIOLOGY—SECOND PAPER)

## EIGHTH PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be answered*

1. Write a short essay on Social Progress as an ideal and a fact, and indicate its main stages.

2. Analyze the population of the city of Calcutta from the following points of view : (a) age, (b) sex, (c) occupation, and (d) religion.

What bearing has this analysis on the civic problems of the city?

3. Describe how far the attitude towards women is determined by the type of social organization and the mode of economic life.

4. Examine the social and economic consequences that follow from the migratory character of Indian industrial labour.

5. Discuss the place of the tribe in social evolution. Illustrate your answer from Indian conditions.

## SECOND HALF

*Answer ANY THREE questions*

1. Discuss, giving Indian examples, the environmental aspects of social development. What are the recent developments of the environmental approach to sociology?

2. Examine fully the changes which different types of castes are undergoing in the present day. Hence attempt a classification of the criteria of the present social gradation in India.

3. Contrast the marital conditions of the Hindus, Muhammedans, and depressed classes of Bengal. How do urban industrial centres create special sex problems?

4. Indicate fully the contributions of the Dravidian peoples to the Indian social polity and culture.

5. Account for the disparity of population growths in Eastern and Central and Western Bengal. Examine its sociological bearings.

## MENTAL AND MORAL PHILOSOPHY

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 (HISTORY OF ANCIENT AND MEDIAEVAL EUROPEAN PHILOSOPHY)

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

## (GENERAL)

*N.B.—Answer ANY THREE questions*

*Full Marks—50*

1. Give the substance of Anaximenes's philosophy, and show that he is in advance of his predecessors. Attempt a critical estimate of Ionic philosophy, and show that Pythagoreanism is an advance on Ionic thought.

*Or,*

Give an account of Zeno's doctrines. Reproduce his arguments against the reality of motion, the existence of the manifold, the reality of space, and the veracity of sensuous perception. Examine these arguments.

2. Discuss the question of the place of Heraclitus in the history of Greek philosophy. Was he a hylozoist? Fully discuss. Contrast his teaching with that of the Eleatic school. Examine his system, and show that in his teaching is to be found the germ of the solution of the enigma of the universe.

3. Discuss the relation of Empedocles's philosophy to antecedent systems of Greek philosophy and the Atomic theory. How does the system of Anaxagoras stand opposed to the Atomic theory? Explain clearly Anaxagoras's doctrines of *nous* and the *omsiomen* and examine them.

Or,

State the points of agreement and difference between Socrates and the Sophists. Exhibit the Socratic method of philosophy. In what does his peculiar philosophical significance lie? State his ethical doctrines and briefly examine them.

4. What is the relation of Plato's philosophy to that of Socrates? What are the points of difference between Opinion and Knowledge according to Plato? What does he say about the nature of the human soul? 'With Plato philosophy exhibited an idealistic antithesis to the given actuality, an antithesis which demanded the supplement of a more realistic theory of things. This was supplied by Aristotle.' Develop the thought contained in this sentence.

Or,

Write notes on Aristotle's views on :—

- (a) Form and matter.
- (b) The soul.
- (c) Dianotic and ethical virtues.
- (d) Space and time.

Examine his views on (a), (b) and (d).

Or,

Give an account of scepticism in Greek philosophy, and examine it. Show that it arose as a reaction against Stoic and Epicurean dogmatism.

5. Briefly trace the history of Neo-Platonism, and explain Plotinus's doctrine of the three stages of Being. Examine his mysticism.

Or,

What was the main problem of Scholasticism? Mention its characteristics and its different stages. Give an account of Abelard's teaching. Compare his ethical teaching with that of Kant, and examine his system of philosophy.

## SECOND HALF

### (PLATO AND PLATO'S 'REPUBLIC')

N.B.—Answer ANY THREE questions

1. Bring out critically the real significance of Plato's philosophy, with special reference to the thought which preceded and succeeded him.

Or,

State the essential points of Plato's philosophical position, and indicate critically the similarities, if any, which the position has with any school or schools of Indian Thought.

2. Give a careful statement of Plato's *Doctrine of Ideas*, and discuss the bearing of the doctrine on his conception of the phenomenal world.

Or,

State accurately Plato's *Theory of Knowledge*, and discuss its bearing on the nature and validity of sense-knowledge as he conceives it.

3. Estimate critically the place Plato's *Republic* occupies among his other Dialogues, and indicate how far the ethical and political views presented in the Republic underwent modifications in his *Laws*.

4. What is Plato's conception of Justice for an individual and the State? Discuss the place he assigns to Justice among his cardinal virtues.

Or,

What, according to Plato, is the highest good of life? Discuss the relation the conception bears to the virtuous life of an ordinary citizen.

5. Indicate critically Plato's conception of God, and discuss the place he assigns to God in his scheme of the universe.

Or,

State carefully Plato's conception of Religion, and discuss the relation his ethical position bears to a religious life as conceived by him.

## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE questions*

1. What are the main characteristics of modern philosophy and how are they illustrated in the system of its founder?

2. Give a comparative estimate of the conception of God found in Descartes, Leibniz, Spinoza, and Berkeley.

3. In what sense and how far has Berkeley proved that reality is spiritual?

4. Explain and criticize Locke's theory of knowledge.

5. How far is Hume a sceptic? How does his scepticism differ from the position of Kant (with regard to our notions of substance, causality, etc.)?

### SECOND HALF

*N.B.—Answer Question No. 5 and ANY TWO of the rest*

1. Explain and give a critical estimate of Kant's doctrine that the understanding makes nature.

2. How does Kant show that the principles of substance, causality, and reciprocity are presupposed in experience?

3. Compare Kant's view of the moral life with that of Hegel.

Or,

Give an exposition of Hegel's theory of the state.

## 4. Give a critical account of Kant's theory of the Beautiful.

Or,

On what grounds does Kant hold that a living organism cannot be explained by means of mechanical principles alone? To what ultimate conception of nature is he led from this standpoint? Examine the validity of his theory.

5. What does Hegel mean by the Absolute? Bring out the distinctive features of his conception of it.

Or,

'The critical philosophy finds its culmination in the philosophy of Hegel.' Justify or impugn this statement.

## THIRD PAPER

*The questions are of equal value*

## FIRST HALF

N.B.—*The candidate is expected to point out, wherever possible, points of similarity between Indian and European systems of Philosophy.*

*Answer ANY THREE questions*

1. Outline the arguments by which Chārvāka refutes Inference as a mode of Proof. With what object in view does he attempt this refutation?

2. Sketch the main steps of the line of reasoning by which the Bauddha controverts the doctrine of Permanence.

3. Trace the development of the conception of Self (Ātmā) in the Upanishads.

4. Explain the significance of the doctrine of the three *guṇas* in Indian Philosophy. How does the Bhāgavat-Gītā characterise the Soul that has transcended the *guṇas*?

5. How does the Jaina system expound its fundamental categories? Give a critical exposition of the doctrine of *Syāt-vāda*.

## SECOND HALF

*Answer ANY THREE questions*

1. How do the Buddhists and the Naiyāikās distinguish between *nirvikalpaka* and *savikalpaka* perceptions? What is your own estimate of their views?

2. What is the distinction between *svārtha* and *parārtha* inferences, and what are their logical forms? Do you agree with the view that for purposes of proof an inference must have five members or propositions?

3. Discuss the Nyāya-Vaiśeṣika theories of generality (*sāmānya*), particularity (*viśeṣa*), and inherence (*samavāya*).

4. Critically consider the attitude of the Sāṃkhya and the Yoga systems with regard to the question of God's existence.

5. Explain Saṃkhya's doctrine of *māyā*. What are Rāmānuja's objections to it, and how far can you meet them from the standpoint of Saṃkhya?

Or,

Discuss the different theories of validity (*prāmānya*) in Indian Philosophy.

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. When an object is known, how far, and in what sense, are the object and the knowing independent of each other? Is knowing itself known as an object?
2. Is a thought-content necessarily imaged? How is the image related to the meaning when (i) a table seen in the past, (ii) the class *table*, is meant?
3. Does the judgment 'S is P' imply belief (i) in the existence of S, (ii) in a factual relation between S and P? Does the subject of the existential judgment 'S is' mean a fact?
4. Examine the view that every synthetic judgment is also analytic.
5. Thinking knowledge demands to be realized in an intuition.  
Discuss the implications of the statement.

## SECOND HALF

*Answer ANY THREE questions*

1. Distinguish between Reality and Thought, and examine in this connection the Kantian Doctrine of the Thing-in-itself.
2. Discuss the following statements :—  
 (a) The object is an appearance in reality, but does not qualify it;  
 (b) The object is an appearance of reality, and both is and is not reality.
3. Explain the Correspondence Theory of Truth, and give your own estimate of it.
4. Is my knowledge a contribution to reality? If so, in what sense?
5. To question the intrinsic validity of cognitions is to invalidate all cognitions. Explain and discuss.

## FIFTH PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be attempted*

1. How does the modern doctrine of Relativity modify our views of Space and Time? Discuss the remark that 'the position metaphysically of the relativist is apparently one of solipsism.' What, in your opinion, is the metaphysical bearing of the doctrine of Relativity?
2. Show that Substance and Cause 'are two aspects of a single principle of construction' and that 'the causal relation is the obverse side of the existence of a substance'. Discuss, in this connection, Mr. Russell's remark 'that the "thing" with "aspects" is as useless as permanent substance, and represents an inference which is as unwarrantable as it is unnecessary.'

8. Expound fully the import of the formula : ' Not mechanism or vitalism, but mechanism *and* teleology'. Justify, if you can, the remark ' that teleological concepts are out of place except where something which is an actual fact is also an actual value.'

4. Discuss, in their historical affiliations, the following two theories of Individuality :—

(i) All finite individuals are ' in ultimate analysis connexions of content within the real individual to which they belong.'

(ii) All finite individuals are ' individuals constitutive of an Individual.'

What is, in your opinion, the essence of the finite individual?

5. Examine the definition of Value as a ' subjectively conditioned objective quality.' Attempt a critical estimate of the different types of Value-philosophies in modern times.

## SECOND HALF

Answer ANY THREE questions

1. ' The real foundation of objective idealism lies in the doctrine of a self-distinguishing, self-objectifying, self-consciousness.'

Give a concise statement of the standpoint of Absolute Idealism and set down the main lines on which the whole position is assailed by Neo-Realism and Critical Realism.

Or,

Give a brief exposition of Meinong's *Gegenstandstheorie*, and indicate how the ' realistic ' school of Graz is attempting a closer relation between *Gegenstandstheorie* and *Logistic*.

2. ' Reality is an organic unity.'

' Reality is spiritual, because *esse* is *percepti*.'

Develop the standpoint embodied in these two statements.

Or,

Give a concise and critical statement of the opposite standpoints of Neo-Idealism and Neo-Realism on the distinction and intrinsic relation between the object of thought and real being. Refer to the chief exponents of both sides.

3. ' If change is original, reality is free activity. Freedom is thus creative action '

Discuss Bergson's conception of Freedom, and say in what sense *change* is original and ultimate.

Compare the views of Bergson and Bradley on the non-reality of Time.

4. ' In his theory of knowledge, Russell has moved from a position akin to that of Brentano and Meinong to one which approaches American Neo-Realism.'

Discuss Russell's standpoint in reference to this statement and point out the main distinction between American, British, and Continental Neo-Realism.

5. Critically consider the following :—

(a) Metaphysics is not really herself except when she surpasses and transcends the concept and arrives at intuition.

(b) Duration is ' a qualitative multiplicity, with no likeness to number, .....a pure heterogeneity within which there are no distinct qualities'.

(SPECIAL BRANCH OF INDIAN PHILOSOPHY)  
(SĀMĀHYA YOGA GROUP)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE*

1. Explain clearly the nature of Sāmkhya guṇas following the interpretation of Bhikṣu.
2. Explain clearly the theory of Satkāryavāda and criticise the doctrine from the point of view of any of its opponents.
3. Give a clear exposition of the Sāmkhya doctrine of inference, and how it may be employed for proving the existence of the Prakṛti and the puruṣas.
4. Explain the nature of the puruṣas and their relation to Prakṛti.
5. Compare and contrast the Sāmkhya with Buddhism on some of their essential points of similarity and difference.

## SECOND HALF

*Answer ANY THREE*

1. अवाचादहुष्टकारणजन्यत्वाच्च नावस्तुत्वम् ।

- Explain fully the above aphorism. Against whom is the above directed?
2. What is अत्यन्तपुरुषार्थ according to the Sāmkhyas? Is it something positive or negative?
  3. Why do the Sāmkhyas believe in the existence of innumerable all-pervading puruṣas? Give reasons.
  4. How is the movement of प्रकृति accounted for by the Sāmkhyas? Does their theory seem to you reasonable?
  5. How does the connexion between पुरुष and प्रकृति cease according to the Sāmkhyas? Can that connexion revive again?
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## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Give a critical estimate of the Vachaspati's account of the nature of the influence exerted by the puruṣas on the Prakṛti.
2. Explain clearly the nature of five-fold vṛttis.
3. Explain the ontological problem of the relation between the whole and the part according to Yoga, and compare or contrast it with the Buddhist view.
4. Give a full account of the Yoga theory of karma and rebirth.
5. Give a clear exposition of the Yoga theory of the control of the unconscious (Samskāras) by the control of the conscious mental states (vṛtti) and leading to samprajñāta and asamprajñāta samādhis and ultimately to the dissolution of the mind (citta).



## SECOND HALF

Answer ANY THREE questions

1. Distinguish between Sankhya Realism and Kantian Phenomenalism, and give your own estimate of the former.
2. Expound the Yoga doctrine of *Pariṇāma*, and contrast it with the Sankarite theory of *Vivarta*.
3. How far is concentration a means to self-control? Discuss the question with special reference to the Yoga theory of conscious control of the subliminal and the unconscious.
4. Distinguish, after Yoga, between Perception and Inference as sources of knowledge, and compare the Yoga view with the Buddhist view of the question.
5. Compare the Theism of Yoga with the Theism of Nyāya, and give your own estimate of the former.

(SPECIAL BRANCH OF INDIAN PHILOSOPHY)

(TRANSLATION GROUP)

## SIXTH PAPER

The questions are of equal value

## FIRST HALF

Attempt ANY THREE of the following questions

1. Explain **ब्रह्म-परिणामवाद** (Brahmapariṇāma-vāda) or the doctrine which maintains that Brahman evolves into the world, and **ब्रह्म-विवर्तवाद** (Brahma-vivarta-vāda) or the doctrine which maintains that Brahman does not change into, but merely appears as, the world.

And in connection with the latter doctrine, show that the *Māyā* (माया) is a notion not unknown to the Upanishads.

2. From the two views given in the first question, discuss the respective relation of the soul (जीव) to the Ultimate Reality (ब्रह्म).

3. Clearly explain and elaborate the idea contained in the following extract from the standpoint of Saṅkara :—

'The finite self cannot be altogether separate (भिन्न) from Brahman. It is only by betaking itself to distinctions created by semblance-relations, understanding, senses, etc. (**बुद्ध्याद्युपाधिकृतम्**), that the self, being in reality Brahman, is said to be Agent (**कर्त्ता**) and Enjoyer (**भोक्ता**).'

4. In one of the *Sūtras* in the first chapter of the '*Brahma-Sūtra*', Saṅkara quotes the following passages from the *Bṛihadāraṇyaka-Upanishad* :—

'When a drum is beaten, a shell blown, a lute played, the tones are (**शब्द, ध्वनि**) going out from them cannot be grasped; but if the instrument or the player is grasped, then the tones are grasped at the same time.'

State the real significance of these images and explain their sense as explained by Saṅkara.

## SECOND HALF

*Attempt ANY THREE of the following*

1. On what grounds does Saṅkara criticise the theory of Realism as advocated by the Vaiśhāṇikas? How does the position of these realists differ metaphysically from that of the Vaiśeṣikas? What is Saṅkara's attitude in relation to each?

2. How is the individual Soul (जीव) related to God? Write a brief note on this relation from Saṅkara's as well as from Rāmānuja's point of view. Quote scriptural texts in support of each and show which of the two stand-points is more consistent with the plain sense of the texts.

3. Summarize the views of the Jainas on the doctrine of 'Saptabhaṅgi'. Justify or criticise this doctrine, giving reasons for your answer.

4. What place is assigned in Saṅkara's system to Reason (तर्क) with special reference to its relation to Āgama or Revelation? Does Saṅkara's teaching differ in this respect from that of any other Indian school known to you?

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE*

1. Give a clear exposition of the Sāṃkhya theory of perception.
2. Give a critical exposition of the Sāṃkhya theory of evolution.
3. Give a clear and critical exposition of the Sāṃkhya theory of guṇas.
4. Elucidate the Sāṃkhya theory of inference, and show how it may be employed in proving the guṇas and the puruṣas.
5. Give a critical estimate of the Sāṃkhya theory of causation, and contrast it with that of Saṅkara and Buddhism.

## SECOND HALF

*Answer ANY THREE*

1. 'The Vedānta texts do not impart knowledge of Brahman; for unless related to activity or the cessation of activity, scripture would be unmeaning, devoid of all purpose.' Explain fully. Which school of Indian Philosophy is referred to in the above text?

2. Is the soul atomic (अणु) or all-pervading (विशु) in the state of परमार्थ? Give reasons for your answer.

3. 'The non-difference (of the world) from that (viz., Brahman) follows from what begins with the Ārambhana.' Explain. How does Saṅkara evolve the doctrine of Māyā from the above sūtra?

4. Give a brief account of the Vedāntic theory of creation.

5. Mention some characteristics of Brahman, according to the Vedānta as interpreted by Rāmānuja.

## (ETHICS)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Discuss the relation of Ethics (a) to Psychology, and (b) to Metaphysics.
2. Discuss the relative value of Utilitarianism and Perfectionism as ethical theories.
3. What is meant by Evolution as applied to morality? Estimate the importance of the Evolutional Theory, with special reference to the question of Moral Obligation and Conscience.
4. Discuss, from the moral point of view, the advantages and disadvantages of modern civilization.
5. Explain and examine Kant's conception of the following :—
  - (a) The Categorical Imperative.
  - (b) The Good Will.
  - (c) The Realm of Ends.

## SECOND HALF

*Answer ANY THREE questions*

1. 'Nothing can be conceived in the world, or even out of it, which can be called good without qualification, but a Good Will.' Discuss how far this may be regarded as a fundamental principle of virtue.
2. Consider critically the moral justification of retributive punishment; and discuss, in this connection, how far it is true to say that the punishment of crime is a self-acknowledgment on the part of the State that it is a moral institution.
3. State and examine the grounds on which Green seeks to establish an identity of principle underlying the Greek and the modern ideas of virtue.
4. How would you distinguish between legal and moral obligation? Explain what you think to be the true source of obligation.
5. 'Progress of Humanity can mean only progress of personal character to personal character.' Discuss this fully.

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*N.B.—Answer ANY THREE questions*

1. Explain, after Green, the nature of spiritual principles in Nature and in man and the kind of relation existing between them. Do they furnish sufficient grounds for moral life and holiness?
2. 'Mechanical causality is a subordinate form of psychical causality.' (Wundt.) Explain the two forms of causality, indicating their nature and relation and their bearing on moral life.
3. What constitutes moral progress and perfection? Discuss the question in the light thrown by Wundt, Green and Ramanuja.

4. How does Kant develop his conception of the Kingdom of Ends from his theory of duty?

5. 'The highest type of moral conduct emerges out of the simplest form of life.' Explain and estimate the value of the criticism 'The course of Evolution, while it shows us the direction in which we *are* developing, for that reason shows us the direction in which we *ought* to develop'.

## SECOND HALF

N.B.—Attempt ANY THREE questions

1. In what different ways has the relation of the Individual to Society been explained? Give your own view, with your reasons.

2. Clearly distinguish the Social Constitution from the Social Composition. Illustrate the importance of Association and Imitation as factors of Social Evolution.

3. Explain the nature of the Social Consciousness. Trace the principal aspects or stages of the evolution of the Social Mind.

4. *Either,*

Explain what is meant by Civilization, and indicate its main stages or types.

*Or,*

Explain the meaning of Social Progress, and indicate the criteria by which it can be estimated.

5. What is meant by the Laws of Social Phenomena?

Explain and illustrate the two classes of Sociological Laws.

## (PSYCHOLOGY)

### SIXTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Answer THREE questions only*

1. Define precisely the scope of Physiological Psychology, and discuss in this connexion its importance in the scientific study of mental phenomena.

2. Examine critically the James-Lange Theory of Emotion, and attempt in your own way to give a physiological basis of Emotion.

3. Discuss critically Helmholtz's Resonance Theory of Audition.

4. Describe the various methods of cerebral localization, and draw a diagram showing the 'areas' that have been localized.

5. Write notes on *any three* of the following :—

(a) Protopathic Sensibility.

(b) Synaptic Resistance.

(c) Colour Blindness.

(d) Facilitation and Inhibition.

(e) Reflex-arc.

(f) Hormones.

## SECOND HALF

N.B.—*Answer ANY THREE questions*

1. Explain the nature of Psychic Elements and their Modes of Combination. Criticize in this connection the rôle of the doctrine of Association of Ideas
2. What are the criteria of Intelligence? Describe the place of the Subconscious in the development of Mind.
3. How do you distinguish Instinct and Intelligence? Discuss the place of Instinct in the evolution of Mind.
4. Write an essay on the psychological nature of Belief.
5. Discuss the theories of Memory.

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Explain and examine the standpoint of Behaviourism, with special reference to its positive contributions to Psychology.
2. Sketch the main contributions of Fechner and Wundt towards the development of Experimental Psychology.
3. Discuss the theories of the self in Structuralism, Functionalism, and Self-Psychology.
4. Explain the different meanings of subconscious and examine the value of the main theories with regard to it.
5. Briefly trace the history of the problem of the relation between mind and body in modern Psychology.

## SECOND HALF

*Attempt ANY THREE questions*

1. Describe the methods of diagnosing Feeble-mindedness. Do you accept the concept of 'moral imbecility'?
2. How does McDougall criticize Freud's theory of dreams? Give your own views on the subject.
3. Describe the various phenomena of hypnotism. How do you explain them?
4. Discuss the relation of neuroses, perversions, and normal character.

*Or,*

Explain the mechanism of Hysteria. Illustrate your answer from case history.

5. Write notes on :—

- (1) Methods of Animal Psychology.
  - (2) Criteria of intelligence in animals.
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## (SPECIAL BRANCH OF INDIAN PHILOSOPHY)

## (VEDANTA GROUP)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Attempt ANY THREE of the following questions*

1. Show how the principle of Adhyāsa (अध्यास) is applied in the Sāṅkara-system to the explanation of the world-appearance (प्रपञ्च-विभ्रम).

2. Sāṅkara, in a certain sūtra, takes the description of five sheaths (कोषः) from the Taittiriya Upanishad, and concludes that Brahman described as आनन्दमय there is not final and is not identifiable with मुक्ति, since Brahma is described also as पुच्छ (a tail) in the end.

Give the purport of the arguments by which he comes to this conclusion.

3. Discuss the conception of ethical evil in the Vedānta.

4. State clearly the several arguments by which Sāṅkara seeks to show the distinction (भेद) between the object (वाक्योऽर्थः) and its idea (विज्ञानम्).

5. Take the following two positions of the subjective Idealists (विज्ञानवादि-बौद्धाः) :—

(a) 'If knowledge (विज्ञान) requires another knowledge to know itself, an अनवस्था (a regressus ad infinitum) would arise.'

(b) 'As all ideas or knowledge (विज्ञान) are essentially identical (सम) in their nature, the assumption of a further idea (to know itself) would be useless.'

Examine these positions and clearly show how Sāṅkara controverts them, and how a knower is established by him.

## SECOND HALF

*Answer ANY THREE questions*

1. Give a critical exposition of Sāṅkara's doctrine of Avidyā.

2. As to the method of Vedānta, Bādarāyaṇa declares 'शास्त्रयोनित्वात्' What object has he possibly in view in making such a declaration?

3. 'स्वप्नोन्माणाभ्यां च' Explain. Sāṅkara takes this sūtra as a पूर्वपक्ष-सूत्र and Rāmāṇja takes it as a सिद्धान्त-सूत्र. Which side do you consider reasonable, and why?

4. State some characteristics of the individual soul having special reference to Sāṅkara.

5. Give a brief account of the Vedāntic theory of creation.

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

## (VEDANTA PARIBHASHA)

*Answer ANY THREE questions*

1. (a) Distinguish between Jīva and Jīva Śākṣī on one hand and between Jīva Śākṣī and Īvara Śākṣī on the other. If Śākṣī is pure consciousness what is the basis of distinctions attributed to it?

(b) How does the function of the Inner Organ as a *vīśeṣaṇa* differ from its function as an *upādhi*?

2. What is the Vedantic theory of Induction? Expound this theory clearly after the manner of Dharmarāja, contrasting it with the doctrine of the Naiyāyikas. It is said—“तद्वानुमानमन्वयिरूपमेकमेव”। Explain this statement, and justify it from the standpoint of Śaṅkara's school of Vedānta.

3. (a) What, according to Vedānta, is the import of a proposition?

(b) Distinguish between Śakti and Lakṣaṇa and illustrate your answer with examples.

4. (a) What is meant by स्वरूपलक्षण ? How can a thing which cannot be a predicate of itself serve as its own differentiating character? State and expound the स्वरूपलक्षण of Brahma.

(b) Name and briefly describe the four kinds of *pralaya*.

## SECOND HALF

*Answer ANY THREE questions*

1. Explain the Rāmānuja view of causation and contrast it with that of Śaṅkara and Sāṃkhya.

2. Explain the Rāmānuja theory of illusion and contrast it with that of Śaṅkara Vedānta.

3. Compare and contrast the Rāmānuja theory of Īvara with that of Śaṅkara in its relation to world, the souls, and as ultimate reality.

4. Compare and contrast the conception of avidyā in Rāmānuja and Śaṅkara.

5. Give a critical estimate of the refutation of Śaṅkara's monism by Rāmānuja.

## MENTAL AND MORAL PHILOSOPHY

(SPECIAL BRANCH OF INDIAN PHILOSOPHY—NYĀYA-VAIŚEṢIKA

GROUP)

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Bring out clearly the Nyāya conception of bondage and emancipation by comparing and contrasting it with the views of Śaṅkara, Rāmānuja, and the Sāṅkhyas.

2. Do you support the view that the author of the Nyāya-sūtras do not believe in God? Explain clearly the sūtra : *Īśarah Kāraṇam Puruṣakarmā-phalyadarśanāt*.

3. What is the Nyāya conception of *ātman*, and how is *ātman* related to *manas* and the external senses? How is the existence of an *ātman* proved?

4. How do the Naiyāyikas prove the existence of the external world by refuting the asceticism of the Bauddhas?

5. Bring out clearly the Nyāya conception of *manas* by comparing and contrasting it with the conception of mind in Western philosophy.

## SECOND HALF

*Answer ANY THREE questions*

1. Discuss the Nyāya and the Bauddha definitions of perception (*pratyakṣa*).

*Or,*

Explain the different conceptions of sense (*indriya*), and discuss the different theories of the function of the senses in perception.

2. Discuss the Nyāya theory of extraordinary (*alaukika*) perception and its different forms.

3. How do the Naiyāyikas classify inferences and explain their logical forms? Do you support the five-membered form of an inference in any case?

4. How do the Nyāya-Sūtra and Bhāṣya support the validity of scriptural testimony (*Veda*)? Do you consider it a sufficient proof of its validity as an independent source of knowledge (*pramāṇa*)?

5. Discuss the Nyāya theory of valid knowledge and its method (*pramāṇa* and *pramāṇa*) in the light of the text : '*pramāṇatorthapratipattau pravṛtṭisā marthyādarthavat pramāṇam*'.



## PHILOSOPHY

(SPECIAL BRANCH OF INDIAN PHILOSOPHY—NYĀYA-VAIŚEṢIKA  
GROUP)

## SECOND PAPER

## FIRST HALF

*The questions are of equal value*

*Answer ANY THREE questions*

1. Would you subscribe to the doctrine that reality has a fixed constitution? Explain the Vaiśeṣika view of the question, and give your own estimate of it.
2. Is 'knowing' itself known? Discuss the Nyāya-Vaiśeṣika and the Sankarite views of the question.
3. Compare the Vaiśeṣika with the Buddhist view of non-relational (*nirvikalpa*) perception, and discuss the question whether such perception should rank as valid knowledge.
4. Give your own estimate of the Vaiśeṣika view of 'Universals.'
5. Would you accept the thesis that the world is the creation of an Intelligent Agent? If so, on what grounds?

## SECOND HALF

*The figures in the margin indicate full marks*

*Answer Question Nos. 1 and 6 and ANY TWO out of the rest*

1. Name and define the six positive categories recognized in the Vaiśeṣika system, and point out their mutual similarities and dissimilarities. 15
2. What is the place of 'univereal' (सामान्य) in the Nyāya-Vaiśeṣika school? Is it real or merely logical? Give reasons for your answer. 10
3. Explain the following statement of Praśastapāda, with special reference to the eternity and ubiquity of सामान्य :— 10

यद्यप्यरिच्छिन्नदेशानि सामान्यानि भवन्ति तथाप्युपलक्षणनियमात् कारण-  
सामग्रीनियमाच्च स्वविषयसर्वगतानि ।

4. Sum up the Vaiśeṣika theory of Sound under the following heads :— 10
  - (a) Origin;
  - (b) Varieties;
  - (c) Laws of propagation; and
  - (d) Perception.
5. Define Vyāpti after Praśastapāda and Viśvanātha, and explain clearly the Nyāya theory of induction. 10
6. Establish the existence of *manas* as an atomic organ, state its functions, and point out its distinction from the *ātma*. 15

## PHILOSOPHY

(LOGIC)

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

N.B.—Answer ANY THREE questions

1. 'Hegel derives existence from idea.' Is this a correct representation of Hegel's view? Discuss fully.
2. What light does the Behaviourist psychology throw on the relation of thought to language?
3. What is the real distinction between a categorical judgment and a hypothetical one? In the light of your answer, discuss the traditional scheme of categorical and hypothetical judgments.
4. Do you regard affirmation and negation as correlative, or is either of them primary? Discuss in this connection the significance of a negative judgment.
5. Critically examine Bradley's theory of the disjunctive judgment.

## SECOND HALF

*Answer ANY THREE questions*

1. Is an inference equivalent to a hypothetical judgment of the form 'if the premises be true, the conclusion is true'? In 'A is, therefore B is', does *therefore* mean an objective content or only an epistemic act?
  2. Does an inference necessarily demand a universal premise? Discuss the views of Bradley and Mill on the question.
  3. Critically examine Mill's view of the law of causation as the ground of induction and as itself an induction.
  4. There is but one method of proof which is at once deductive and inductive.  
Discuss the statement.
  5. Is mathematical reasoning syllogistic?
- 

## MENTAL AND MORAL PHILOSOPHY

(LOGIC)

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Explain the view that the principle of the uniformity of nature is the ultimate major premise of all inductive conclusions.  
Do you support it?

2. Define the principle of causality, and discuss whether it is (1) an *a priori* and *self-evident* truth, or (2) *derived* from such a truth, or (3) derived from *empirical* observation.

3. State Bacon's conception of 'forms'. Are Bacon's inductive methods adequate for the discovery of 'forms'?

4. Does the application of an inductive method involve deductive reasoning? Consider this question in the light of the argument: *ABC* is followed by *abc*, *BC* is followed by *bc*,  $\therefore A$  is causally connected with *a*.

5. Discuss the nature of certainty obtained by induction and show how far, if at all, Hume's scepticism regarding the objective validity of a causal relation can be removed by Mill's inductive methods.

## SECOND HALF

*Answer ANY THREE of the following*

1. Examine the theory that every judgment is a characterization of Reality.

2. Consider the claim of the Hegelian Dialectic to be the natural method of march of thought towards Reality.

3. According to some, the traditional laws of thought are in themselves inadequate. What development do you notice in this direction amongst the modern Logicians?

4. 'Inference is only delayed reaction to some problematic situation.' Discuss.

5. In what way do you distinguish between Logic and Psychology?

## MENTAL AND MORAL PHILOSOPHY

### PHILOSOPHY OF RELIGION

#### FIRST PAPER

*The questions are of equal value*

#### FIRST HALF

N.B.—*Answer ANY THREE questions*

1. Discuss the relation between Philosophy and Religion.

2. What are the 'forms' of religious consciousness? Explain critically the basis of religious consciousness.

3. Discuss how far Religion affects the question of values in a man's life. Are religious and moral values the same?

4. Analyze the conception of Natural Law, and discuss its relation to religious authority.

5. Explain the nature and source of the Mystic Conception in Religion.

#### SECOND HALF

*Only THREE questions are to be attempted*

1. Wherein do you trace the essence of the idea of God? Indicate the different ways in which this idea in its pre-historic form has expressed itself, and review critically the important landmarks in the evolution of the idea of God.

2. State precisely the implication of the Cosmological Proof for God's existence. Examine the contention that 'the motive of this proof is to exhibit God as adequate to produce the world.'

3. On what grounds would you distinguish the Natural from the Moral attributes of God? In what sense, if at all, can you speak of God as 'the All-in-All of qualities and attributes'?

4. What is the essence of Personality? Justify, if possible, the thesis that 'God may be Personal, yet not finite.'

5. 'The Absolute is the pre-cosmic nature of God, and God is the Absolute from the cosmic point of views.' Examine, in the light of this statement, the validity of the distinction between Absolute and God.

## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE questions*

1. Explicate your idea of Time and of Eternity. And discuss the question whether God is in Time or Time is in God.

2. What do you understand by Incarnation? In what sense, if at all, can God become incarnate? Discuss the various theories on the subject and estimate their values.

3. Explain and examine the statements :—

(a) God alone is real.

(b) The world is necessary for God.

4. How would you account for the origin of the world? In what sense can God be described as the Creator of the world? Is your idea of creation compatible with the theory of Evolution of the world?

5. What is a Miracle? Are miracles possible? Need we believe in miracles in order to believe in God?

### SECOND HALF

*Answer ANY THREE questions*

1. Explain the concept of individuality, and discuss the different theories of individuation with special reference to the finite self.

2. What do you mean by the freedom of the finite self, and how do you relate it to divine sovereignty?

3. How does the presence of evil and suffering in the world present a problem for us? Can this problem be solved on any theory of divine goodness?

4. 'The belief in personal immortality cannot be vindicated without the belief in karma and rebirth.' Discuss the truth of this statement.

5. What do you understand by 'the eternal life'? How and when does it become possible for any man to realize it?

## PHILOSOPHY

### EIGHTH PAPER

*The figures in the margin indicates full marks*

1. Write an essay on any one of the following subjects :—

100

(a) The influence of Hegelianism on British philosophy.

(b) Green and Bradley—a comparison.

- (e) The evolution of religion.
- (d) The Gestalt Psychology.
- (e) Theories of truth and error.
- (f) Plato's influence on modern European thought.
- (g) Self-realisation and self-sacrifice.
- (h) Navya Nyāya and Aristotle's Logic.

## COMMERCE

### INTERNAL EXAMINERS

- PROF. PRAMATHANATH BANERJEA, M.A., D.Sc., BARRISTER-  
AT-LAW
- MR. G. BASU, B.A., A.S.A.A.  
 „ S. R. BATLIBOI, F.S.A.A.  
 DR. ROHINIMOHAN CHAUDHURI, M.A., PH.D.  
 „ SURENDRAMOHAN GANGUALI, D.Sc.  
 MR. H. D. GHOSH, M.A.  
 „ M. K. GHOSH, M.A., B.Com.  
 „ PRAPHULLACHANDRA GHOSH, M.A., B.Sc.  
 DR. JITENDRAPRASAD NIYOGI, M.A., PH.D.  
 „ RADHABINOD PAL, M.A., D.L.  
 „ B. RAMACHANDRA RAU, M.A., PH.D.  
 MR. BIJAYKUMAR SARKAR, A.B.  
 „ NARENDRANATH SARKAR, M.A.  
 DR. HARISHCHANDRA SINHA, M.Sc., PH.D.  
 „ MANMOHAN RAY, M.Sc., PH.D.

### EXTERNAL EXAMINERS

- MR. N. C. CHATTERJEE, M.A., BARRISTER-AT-LAW  
 DR. BHANUBHUUSHAN DASGUPTA, M.A., PH.D.  
 „ L. C. JAIN, M.A., LL.B., PH.D.  
 MR. NARENDRAKUMAR MAJUMDAR, M.A.  
 RAI BAHADUR BIJAYBIHARI MUKHERJEE, M.A.  
 MR. P. C. NANDI, B.A., (CAL.), B.Sc. (CANTAB.).  
 DR. P. P. PILLAI, B.A., B.L., PH.D. (ECON.).  
 MR. RANJIT RAY, M.A., A.C.A.  
 „ K. C. BASAK, B.A. (CANTAB.).

### FIRST PAPER

#### (REALISTIC ECONOMICS)

*The questions are of equal value*

#### FIRST HALF

*Answer ANY THREE questions*

1. Explain what you mean by rationalization. Indicate its bearing upon the problem of unemployment.

2. Analyse and illustrate the dominant tendencies of business organization to-day.
3. What are the services that co-operation and co-partnership have rendered to progress? Examine their possibilities in India.
4. 'Capitalistic production is planless.' Comment on this statement.
5. In what circumstances and with what end in view should monopolies be controlled?

## SECOND HALF

*Answer ANY THREE questions*

1. 'Protective import duties change the barter terms of trade in favour of the duty levying country.'  
Elucidate this proposition, and discuss how far it may be regarded as a valid argument for protection.
2. Discuss the influence of international loans upon (a) the foreign exchanges, and (b) the price level of the borrowing and lending countries.
3. Explain how dumping may be profitable to a concern as a permanent policy. How is the interest of domestic consumers affected by it?
4. How far should stability of prices be sacrificed to stability of the foreign exchanges? Under what conditions are both forms of stabilization consistent with each other?
5. To what extent would you regard (a) the total stock of world's gold supply, and (b) its distribution, as factors giving rise to or aggravating the present depression?

## ACCOUNTING

### SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Attempt THREE questions only out of the five, Question No. 5 being compulsory*

1. The assets of a merchant on 30th September, 1932, as shown by his books, were Rs. 46,000, and his liabilities Rs. 34,000. He filed his petition in bankruptcy and estimated his deficiency to be Rs. 24,000. After making the above estimate, he found that the following items were not passed through his account books:—

Interest at 6% on his capital from 1st January, 1932.

A contingent liability for Rs. 2,400 on bills discounted by him for Rs. 10,000.

Amounts due as wages Rs. 250, as salaries Rs. 750, as rent Rs. 340, and as rates and taxes Rs. 260.

Prepare his statement of affairs and his deficiency account.

2. A, B, and C, Colliery Proprietors, purchase wagons under a Hiring agreement, the terms being annual instalments of Rs. 8,000 for five years, payable at the end of each year. It is ascertained that the wagon company have computed the price on a 5 per cent. basis, and the cash price would have been Rs. 12,690.

Pass journal entries in the Colliery Proprietors' Books and raise necessary ledger accounts therefrom for the five years.

3. (a) A Company has a credit balance on Profit and Loss Account of Rs. 4,00,000. It has an Ordinary Share Capital of 100,000 shares of Rs. 10 each, Rs. 7 paid.

It is arranged that a bonus shall be declared equal to the amount of uncalled capital, that a final call shall be made, and that the bonus shall be applied in payment of the call. Show the necessary journal entries and the ledger accounts affected thereby.

(b) What do you understand by profits prior to incorporation? Explain how such profits or losses should be dealt with.

A Joint Stock Company was incorporated on 1st April to take over a business as a going concern from 1st January of the same year. The total turnover for the year ending 31st December was Rs. 5,00,000, namely Rs. 1,50,000 for the first period up to 1st April and Rs. 3,50,000 for the following period. The net profit for the year was Rs. 50,400. How should the profits earned prior to incorporation be ascertained?

4. Md. Israil bought Rs. 50,000 5% Debentures of Rs. 100 each in the New Jute Manufacturing Company, Ltd., at 85% on the 31st March, 1932. The Brokerage and Expenses were Rs. 150. Interest is payable half-yearly on the 30th June and 31st December. He sold one-half of his holding on the 30th September following at 90% brokerage and expenses Rs. 120. Calculate income tax, at 18 paise in the rupee.

Show the Investment Account in Israil's Ledger, balanced at 31st December, 1932.

5. The following is the Balance Sheet of Parekh Bros., as on 31st December, 1932 :—

	Rs.		Rs.
Trade Creditors	... 15,000	Mill Buildings	... 20,000
Mortgage on Mill	... 12,500	Machinery and Plant	... 30,000
Bank Overdraft	... 4,000	Stock at cost	... 10,000
Capital	... 36,000	Trade Debtors	... 7,500
	<u>67,500</u>		<u>67,500</u>

A revaluation of the Mill and Machinery shows their present value to be Rs. 40,000 and Rs. 60,000 respectively, and Parekh Bros. agree to sell the business as a going concern as from 1st January, 1933, to a Limited Company in process of formation. The Company is to take over the Mill and Machinery at the increased value, and the other assets at the figures at which they appear in the Balance Sheet, and also the liability to Trade Creditors and the Bank, the Vendors engaging to discharge the mortgage.

In part consideration for the purchase, the Vendors are to take 5,000 fully paid shares of Rs. 10 each in the new Company, and to leave Rs. 20,000 on loan with the Company, the balance to be paid to them in cash. The Company is registered on 1st February, 1933, and the Vendors having paid off the mortgage, the purchase is completed on 31st March, interest at the rate of 6 per cent. on the purchase price being allowed to the Vendors to the date of completion.

Give (a) the journal entries necessary to close the books of Parekh Bros. and (b) the Vendors' Account in the books of the Company.

## SECOND HALF

Attempt ~~THREE~~ questions only out of the five, Question No. 5 being compulsory

1. What is the object of Cost Accounts?

State what is meant by the terms :—

(a) Prime Cost, (b) Process Cost, (c) On Cost,

From the following particulars you are required to show :—

- (a) The Profit or Loss per ton on each class of the commodity,
- (b) The average cost of production per ton of the whole output,
- (c) The average selling price per ton of the whole output.

		Production in tons.	Total cost per ton. Rs. A.	Selling price per ton. Rs. A.
A		15,087	29 10	33 6
B	...	3,830	41 9	56 10
C	...	3,049	38 3	36 6
D	...	120	200 3	183 0

2. A firm has three ledgers in use, viz., a customers' ledger, a creditor's ledger, and a nominal ledger, which are all kept on the Sectional system of balancing. From the following transactions, prepare the adjustment accounts as would appear in each of the above ledgers :—

				Rs.
1933.	Jan.	1.	Balance of Sundry Debtors ...	1,60,000
			Do. Sundry Creditors ...	1,85,000
		31.	Credit purchases during month ...	45,000
			Credit Sales ...	98,000
			Paid to creditors ...	98,750
			Discount allowed by them ...	8,250
			Received cash from debtors ...	78,000
			Allowed them discount ...	2,000
			Accepted bills payable ...	15,000
			Received bills receivable ...	80,000
			Returns inwards ...	8,750
			Returns outwards ...	6,000
			Allowance to debtors ...	2,750
			Bills receivable dishonoured ...	3,750
			Bad debts ...	4,500

3. A and B are partners, sharing profits and losses two-thirds and one-third respectively. Their Balance Sheet on 1st January, 1933, was as follows :—

		Rs.		Rs.
Creditors ...	..	2,200	Properties	19,000
A Capital Account ...	..	15,000	Cash	6,200
B Capital Account ...	..	8,000		
		<hr/>		
		25,200		25,200

C joins them and has one-third share in the profits and losses, A and B having shares in the same proportion between them as before. C pays Rs. 9,930 of which Rs. 6,000 is to be for Goodwill to be left in the business.

(a) Show the opening Balance Sheet of A, B, and C.

(b) The next day they have a fire and the property is destroyed. Rs. 2,290 cash is obtained for salvage. The property was not insured. The partnership was dissolved forthwith. The cost of dissolution was Rs. 300. C becomes bankrupt. Show the final accounts.

4. A coal company takes a lease of a mine for a term of years from the 1st January, 1936, paying a minimum rent of Rs. 10,000 per annum, merging in a royalty of eight annas per ton of a coal raised. The lease contains a proviso to the effect that if the minimum rent paid in any year exceeds the



royalty for the year, the amount of the excess may be recovered by the coal company out of the royalty payable in the following year only.

Coal raised is as follows :—

1926	...	...	2,000 tons.
1927	...	...	12,000 "
1928	...	...	24,000 "
1929	...	..	30,000 "

Give the journal entries necessary to record these transactions in the books of the company and show the ledger accounts therefrom.

5. The Receipts and Payments account of the Hindu Gymkhana for the first period ending 31st December, 1930, is given below :—

RECEIPTS		PAYMENTS	
	Rs.		Rs.
<i>Donations received</i> ...	1,00,000	<i>Buildings</i> ...	80,000
<i>Reserve Fund</i> (being life members fees and entrance fees received) ...	8,000	<i>Expenses incurred on test matches</i> ...	1,800
<i>Test Match Fund</i> (being amounts received for meeting expenses of the specific matches) ...	20,000	<i>Furniture</i> ...	4,200
<i>Revenue Receipts :—</i>		<i>Revenue Payments :—</i>	
Subscriptions (including Rs. 100 for 1931) ...	6,400	Salaries ...	3,600
Locker Rent ...	200	Cricket ...	1,200
Interest on Securities ...	200	Tennis ...	1,080
Cricket ...	800	Insurance (paid up to 30th September, 1931) ...	720
Sundries ...	100	Gardening ...	340
Tennis ...	700	Printing etc. ...	60
Billiards ...	400	Telephone ...	500
		Sundries ...	300
		Investments (at cost) ...	36,000
		Balance ...	7,000
	1,36,800		1,36,800

Subscriptions outstanding for the year 1930 Rs. 600. Salaries unpaid for December, 1930, Rs. 340. Prepare from the details given above an Income and Expenditure Account of the Gymkhana for the period ending 31st December, 1930, and the Balance Sheet as on that date.

## COMMERCIAL LAW

### THIRD PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Answer Question No. 6 and ANY THREE of the rest*

1. State fully what you understand by 'Agreements' and 'Contracts' giving their essential ingredients. 10
  2. Define 'Consideration'. 10
- What are the rights of the parties to a contract (a) if there is no consideration, (b) if there is consideration which fails?

3. Discuss how far supervening impossibility excuses performance of a contract. 10
4. Distinguish between a contract of indemnity and a contract guarantee. 10
5. Discuss the position of an infant in a contract. 10
6. Write a short essay on :— 20
  - (a) Mistake as a vitiating element in a contract.

Or,

- (b) The effect of war on contract.

### SECOND HALF

*Answer Question No. 1 and ANY THREE of the rest*

1. Write a short essay on the Law of Agency. 14
2. Write short notes on :— 12
  - (i) The doctrine of caveat emptor.
  - (ii) The law relating to stoppage in transit.
3. What are the liabilities of a person who holds himself out as a partner, as to the public and as to the other members of the partnership ? 12
4. (a) A negotiable instrument dated the 30th August, 1927, is made payable at six months after date. When will it be at maturity? 12
- (b) A negotiable instrument dated the 31st January, 1928, is made payable 30 days after date. When will it be at maturity?
5. Discuss the position of a minor in the matter of negotiable instruments. 12
6. Define ' Private company '. 12
 

State how, and for what purposes, a company may alter its Memorandum.
7. Under what circumstances can a person be adjudicated insolvent? 12
 

State the effect of an order of adjudication.
8. What is meant by submission to arbitration? What is the effect of a submission to arbitration on an action? 12
9. Write a note on ' Excepted Perils '. 12
 

How far has the Master of ship a ' dual personality '?

### FOURTH PAPER

#### (BANKING)

*The questions are of equal value*

#### FIRST HALF

*Attempt ANY THREE questions only*

- 1 Explain clearly the nature of the work of the Indian Exchange Bank. Can you envisage its future in the reorganized banking system of this country?
2. (a) What, in your opinion, is the value of the suggestion for abolishing legal minimum gold reserve ratios? 12
- (b) Account for the recent piling up of gold in the U.S.A. and French banking systems and the resultant consequences of the same.
3. Sketch the main defects of the English banking system which led to the appointment of the Macmillan Committee. How far do you agree with its main recommendations ? 12

4. Is the present time a suitable one for starting the Reserve Bank for this country? What functions do you propose to confer on it? What early difficulties will it have to encounter?

5. Discuss the main reasons why commercial banks prefer an equitable mortgage to that of the legal mortgage. Differentiate clearly between pledge and mortgage.

## SECOND HALF

*Attempt ANY THREE questions*

1. Examine the salient features of a scheme of banking reform such as you would recommend for adoption in India.

2. In what ways does the existence of an organized Stock Exchange facilitate the financing of industry?

3. What do you understand by the 'Foreign Exchanges'? When is an exchange said to move in India's favour?

4. Explain a banker's lien. Discuss the powers underlying such a lien and the limitations, if any, to which it is subject.

5. Outline a practical scheme for the future reconstruction and reorganization of indigenous banking in India.

## (INDUSTRIAL STRUCTURE AND DEVELOPMENT)

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE questions*

1. Examine the part played by the system of Managing Agency in the development of Indian industries.

2. Compare the economics of vertical and horizontal combinations. Do combinations promote industrial stability in a country?

3. Trace the development of the Lancashire cotton industry. What are the causes that have brought about a decline in that industry?

4. Consider the effects of the Ottawa Agreement upon the development of Indian industries.

5. What do you know of the Tea Restriction scheme? Do you think it will give relief to the tea industry? Can a similar scheme be adopted in the case of jute?

### SECOND HALF

*Answer ANY THREE questions*

1. What are the main features of the present world economic crisis? How far is the crisis attributable to a breakdown of the existing industrial system?

2. Determine the part played by the banks in the industrial development of Germany. Compare it with conditions in India.

3. Explain with illustrations the meaning of the phrase 'Economic Planning'. What are the suggestions that have recently been made for the creation of an economic 'general staff' for India?

4. Indicate the present position and prospects of cottage industries in India.

5. 'Unemployment in India has certain distinguishing features from that in other countries.' Elaborate and discuss.

## (TRANSPORT)

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE of the following*

1. 'The users of a means of transport should be made to pay such charges as will completely provide the means of transport wherever it is economically possible.'

Discuss the statement fully.

2. 'The Railway Rates Tribunal is to authorise railway charges which with efficient and economic management will enable the railways in England to earn the Standard Revenue.'

Carefully examine the above statement.

3. Discuss briefly the history of railway classification of goods in England.

4. Discuss fully the suggestion of financing road development by means of loans. Discuss the recommendation of the Jayakar Committee on this point.

5. Do you consider it desirable to grant monopolies in Road Transport in certain areas? Discuss fully the advantages and disadvantages of such a system.

## SECOND HALF

*Answer ANY THREE of the following*

1. What do you understand by the terms Basic and Derivative Statistics used in Railway operation? Explain the advantages and disadvantages of Ton mile statistics, and the general processes for compiling such statistical figures.

2. Comment briefly on the maximum and minimum charges for the different classes of freight traffic on the Indian railways. Discuss the problem of reasonable (Railway) rates with special reference to the development of the industries and trade of this country.

3. Show by diagrams the layout of fixed signals at stations on the single and double line railways, and explain the functions of such signals and the Block instruments as safety-devices in modern railway transport.

4. Draw a brief sketch of the different routes for the surplus grain traffic of the United Provinces and the Punjab to the Bombay and the Karachi ports, and comment briefly on the workings of the big yard systems on these routes.

5. Draw a brief sketch of the Raneeput Coalfield, showing the important coal despatching points of the E. I. and B. N. Railways and explain the functions of the Oudel, Sitarampur, and Kharagpur yards in the dealing of their Coal Traffic towards the down direction.

## (CURRENCY)

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Would you advocate the introduction of silver into the currency system of various countries as a method of levering prices up?

2. Examine the usefulness of *any two* of the following suggestions for lifting the depression in commodity prices :—

- (a) More spending.
- (b) More saving.
- (c) Loan expenditure on public works.
- (d) Reduction of taxation.
- (e) Increase of fiduciary note issue.

3. What, in your opinion, are the right principles of regulation of note issue of a country?

4. Business is sometimes poor and sometimes good.

What figures and statistics will you use in measuring such ups and downs of business in a country?

5. What do you understand by the International gold standard? What are the conditions for its successful working?

## SECOND HALF

*Answer ANY THREE questions*

1. What factors influence the level at which the Bank of England rate is ordinarily fixed? To what extent, if at all, have they been modified by the suspension of the gold standard?

2. Examine the influence of price changes on industrial and social relations.

3. Explain in detail any method of measuring the purchasing power of money, and examine its relation with the index number of wholesale prices.

4. What do you mean by a long rate of exchange? Explain the main factors on which it is based.

5. (a) A Calcutta merchant owes Paris Fcs. 10,000 and a bill on Paris can be obtained at 2·5 as. per franc. If the exchange on London is 1s. 6½d. and London quotes Paris at 86·09 Fcs. per £1, which is the best way of payment, direct or *via* London? Neglect charges.

(b) London quotes Milan lira 66·0 per £1. Milan quotes New York 6·00 cents. per 1 lira. Calcutta quotes Rs. 337½ for \$100 and 1s. 5½d. per £1.

Calculate the profit or loss in remitting £20,000 to London, if we choose the indirect route rather than the direct one, all charges being neglected.

## (STATISTICS)

*The questions are of equal value*

## FIRST HALF

*Only THREE questions to be attempted*

1. Define the arithmetic mean and the median, and compare the advantages and disadvantages of their use in statistical problems.

2. Critically analyze the various steps involved in the collection of data for a Wage Census in Bengal.

3. Explain fully the statement :—

‘Diagrams may often be used to suggest correlation between two series of figures but they cannot be made to prove much.’

4. Construct a blank table, complete with headings and lines and with due regard to spacing in which could be inserted the numbers of persons employed in six groups of industries, four grades of age at three different periods.

5. How would you distinguish between a ‘statistical error’ and a ‘mistake’? Work out the formulae for determining the possible error in the multiplication and division of estimates.

## SECOND HALF

Only THREE questions to be attempted

1. The mortality during a period of five years among a group of female annuitants is given as follows :—

Ages	Deaths	Ages	Deaths
30-34	0	54-59	26
35-39	1	60-64	78
40-44	6	65-69	108
45-49	8	70-74	239
50-54	12	75-79	527

Find the mean and median and also an approximate value of the mode.

2. Given the consumption of tea in Bengal for the quinquennial periods—

	Pounds <i>per capita</i> .
1910-1914	... 60'08
1915-1919	... 65'60
1920-1924	... 64'42
1924-1929	... 58 45

Estimate the consumption *per capita* for the year 1917.

8. The heights of the University Graduates of the Commerce Department were recorded on two different occasions as follows :—

Height in inches	(1) Frequency	(2) Frequency
60'0	9	10
61'5	15	17
62'3	38	42
63'8	25	20
64'0	3	1
	<hr/> 90	<hr/> 90

The second distribution was obtained on a more careful observation. Do the values of the *standard deviation* reflect this fact? Compare the ratios of the S.D. and the mean in the two distributions.

4. The chest measurements (in inches) of 1,000 men are given as follows :—

Inche	
35	9
36	44
37	88
	107
	335
40	422

Having obtained the values of the mean and the standard deviation, calculate the *probable error* of the mean.

5. Measure graphically, or by whatever method you think most suitable, the correlation between yield of corn and rainfall in the table below :—

Year	Yield per acre in mds.	Rainfall in inches.	Years	Yield per acre in mds.	Rainfall in inches
1900	26.2	2.03	1905	38.9	4.15
1901	29.5	1.82	1906	41.5	2.63
1902	32.6	3.75	1907	36.2	4.78
1903	25.0	2.20	1908	37	3.41
1904	28.5	1.58	1909	21.5	5.23

### (BUSINESS ORGANIZATION)

*The questions are of equal value*

*Answer ANY THREE questions from EACH half*

#### FIRST HALF

1. What are your views on 'Restriction schemes' in the production of raw materials? Discuss the question when the commodity is produced (1) in plantations, and (2) in small holdings and also when it is a monopoly of a country and when it is produced in different countries.
2. Discuss the organization of a produce exchange, and state briefly the nature of business done there. What is a 'Futures Market', and what is the nature of service rendered by a *bona fide* futures market to trade?
3. Discuss the main types of business of the 'Exchange Banks' in India.
4. Write a short essay on the Indian Jute Mill Industry, with special reference to—
  - (a) Organization;
  - (b) Capital;
  - (c) Nature of products.
5. Examine critically the chief features of Indent business in India.

#### SECOND HALF

1. Write an essay on (a) Holding Companies, or (b) the Railway-Road problem.
2. Give full particulars of what you would expect to find in (a) a Partnership agreement, or (b) the Memorandum and Articles of Association of a limited liability company.
3. Discuss the position of Labour, and give your views on legitimate trade union activities.
4. What are the functions of Insurance Companies, and how are they fulfilled by such companies? Illustrate your answer by suitable examples.
5. Discuss the evolution in the size of business units with full reference to the advantages and disadvantages of the various types.

## (AUDITING)

*The questions are of equal value**Answer only THREE questions from EACH half*

## FIRST HALF

1. One of your clients is a manufacturer dealing in (a) Saddlery, (b) Boots, and (c) Leather Trunks. A combined Trading and Profit and Loss Account and a consolidated Balance Sheet are prepared every year. The gross profit has been increasing year after year, and yet the net profit has been dwindling continually. From the view-point of a Cost Accountant, explain the different causes that may have led to this effect, and suggest, in detail, the remedy to be applied.

2. (a) Explain the utility, and also the disadvantage (if any), of creating Reserves. Distinguish between a General Reserve, a Specific Reserve, and a Secret Reserve, giving examples.

(b) One of your clients solicits your advice with regard to investment of their Reserve in (i) Government Securities alone, and (ii) the business of the Company itself. Draft a suitable reply, discussing the cases thoroughly with reference to present-day circumstances.

3. In 1920 a Company owning extensive landed property in Calcutta suffered a loss of Rs. 50,000. In 1921, there was a great land boom in Calcutta and the Directors decided to increase the value of the property by Rs. 2,00,000. This increase in value was credited to a Reserve Account, and a portion of this was utilized in writing off Rs. 30,000 out of the aforesaid loss of Rs. 50,000 of the year 1920 (the balance Rs. 20,000 of the said loss being adjusted against the profits of 1921). Dividends were paid to shareholders in 1921 and 1922. An objection was raised by a shareholder in 1923 that so far as the dividends for 1921 and 1922 were paid before providing for the said loss of Rs. 30,000 (the portion of the debit balance of the Profit and Loss Account referred to above), they were paid out of capital and that the Directors were liable to repay the same. Criticize this objection and cite any similar decided case known to you.

4. (a) Can a Limited Company, in India or in England, issue its shares at a discount?

(b) State all the circumstances under which the capital of a Limited Company can be reduced.

(c) What do you mean by Reserve Liability? What effect has the creation of Reserve Liability on Shareholders and Creditors?

5. What precautions would you as Auditor suggest to guard against frauds in accounts in the following circumstances?—

(i) A cashier enters a smaller sum in the Cash Book than that actually received, and posts the difference to allowances, rebates, or bad debts.

(ii) False entries in Wages Sheets in respect of non-existent or deceased workmen.

(iii) Misappropriation of goods in Stores.

(iv) Misappropriation in Petty Cash.

## SECOND HALF

6. Is it correct to say that divisible profits are the excess or current receipts over current payments? How would you define divisible profits? In what circumstances are capital profits divisible?

7. (a) Discuss briefly the question of providing for the depreciation of a wasting asset which is the main asset of a Limited Company.



(b) Would the question of depreciation of wasting assets lead to any conflict of interests between Debenture-holders, Preference and Deferred Share-holders, and if so, what course would you as an Auditor suggest?

8. What are the principal points to be borne in mind when conducting an investigation on behalf of a firm desiring to convert itself into a limited company? What are the usual adjustments to be made in the determination of average profits? What certificate is to be given by you as Auditor for insertion in the Prospectus?

9. As a professional accountant you are called upon to certify the net daily circulation of a popular Indian daily newspaper. Outline the course of procedure you would adopt and draft a short certificate for the purpose.

10. What are the provisions of the Indian Companies Act 1913 and of the Indian Life Assurance Companies Rules 1930 with reference to the inclusion in the Balance Sheet of particulars of (a) Loans, Overdrafts, etc., in the case of a Bank and in the case of a Life Assurance Company, (b) the Loan borrowed by a Limited Company, (c) Investments, in the case of a Bank and in the case of a Life Assurance Company, (d) Profit and Loss Account, and (e) Capital?

### ( PUBLIC FINANCE )

*The questions are of equal value*

#### FIRST HALF

*Answer ANY THREE questions*

1. Discuss the economic consequences of taxation on production and distribution. Show how these consequences may be modified by the nature of public expenditure.

2. How far is it (a) desirable, and (b) practicable, to impose a tax on purchase and sale of stocks and shares?

3. Discuss the various factors that determine the incidence of an export duty. How far is it possible to use such a duty as an instrument of (a) revenue, (b) protection, and (c) preference? Illustrate your answer from Indian conditions.

4. Compare the merits of *ad valorem* and *specific* customs duties as a source of revenue.

5. Describe the procedure adopted in the Central legislature of India for the passing of a Finance Bill.

#### SECOND HALF

*Answer ANY THREE questions*

1. 'Death duties are taxes on capital. They are, therefore, objectionable from the economic standpoint.' Examine this statement.

2. Describe the financial resources of Provincial Governments under the present system. Critically examine Bengal's claim to the entire proceeds of the export duty on jute.

3. Describe the nature of the control exercised by the legislatures over public finance in Great Britain and India.

4. Describe the constitution and functions of the Public Accounts Committees in India.

5. Trace the history of the cotton excise duties in India.

## ( ECONOMIC GEOGRAPHY )

*The questions are of equal value*

*Answer ANY THREE questions from EACH half*

## FIRST HALF

1. Give a geographical account of the American iron and steel industry, bringing out the influence of geographical factors on the localization of industry.
2. Compare Central Manchuria with the prairie provinces of Canada, and show the importance of Manchuria to the densely populated countries of Japan and China.
3. 'The U.S.S.R., despite vast area and population, cannot, owing to geographical position, be independent of foreign supplies of raw materials.' Discuss this statement.
4. From a study of the economic geography of France and Italy, can you suggest any reasons for political rivalry between the two countries?
5. Critically examine the influence of the Panama Canal on the trade of South America.

## SECOND HALF

1. Compare and contrast the economic geography of the Indus basin with that of the Ganges basin.
  2. Write a short essay on the future of transport in India with special reference to the development of road transport.
  3. Discuss the possibility of further developing water-power in India. What steps have so far been taken in this direction?
  4. What are the reasons for the recent increase in the imports from Japan into India? What measures have been suggested to check such imports?
  5. Examine the geographical position of Egypt in relation to world trade routes.
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# M.A. AND M.Sc. EXAMINATIONS

## PURE MATHEMATICS

### INTERNAL EXAMINERS

DR. HARIDAS BAGCHI, M.A., Ph.D.  
MR. HARIPRASANNA BANERJEE, M.Sc.  
,, SANTOSHKUMAR BHAR, M.Sc.  
DR. ABANIBHUSHAN DATTA, M.A., Ph.D.  
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DR. SURENDRAMOHAN GANGULI, D.Sc.  
MR. MOHITMOHAN GHOSH, M.Sc.  
,, SATISCHANDRA GHOSH, M.A.  
,, MANORANJAN GUPTA, M.Sc.  
,, NARENDRAKUMAR MAJUMDAR, M.A.  
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### EXTERNAL EXAMINERS

MR. RAJCHANDRA BASU, M.A.  
,, D. P. BHATTACHARYYA, M.A.  
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DR. S. C. DHAR, D.Sc.  
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,, D. N. SEN, M.A.  
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,, RAZIUDDIN SIDDIQUI, M.A., Ph.D.  
PROF. J. A. STRANG, M.A., B.Sc.

### FIRST PAPER

*The questions are of equal value*

N.B.—You are required to attempt the SIXTH question ; full marks may be obtained by answering this question and ANY FIVE of the remaining questions.

1. (a) If  $x$  and  $y$  be positive and unequal, then
$$mx^{m-1}(x-y) > x^m - y^m > my^{m-1}(x-y),$$
unless  $m$  lie between 0 and 1, in which case the inequality is reversed. Prove this.
- (b) Show that if  $u_1, u_2, \dots, u_n$  be all positive, and each less than 1, then
$$(1-u_1)(1-u_2)\dots(1-u_n) > 1-u_1-u_2-\dots-u_n.$$

2. (a) Prove that the limit of

$$\left(1 + \frac{1}{x}\right)^x,$$

when  $x$  is increased without limit either positively or negatively is a finite number lying between 2 and 3.

- (b) Show that the limit, when  $n$  is infinite, of

$$1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n} - \log n$$

is a finite quantity lying between 0 and 1.

3. (a) Prove Abel's lemma that if for all values of  $n$ ,

$$A > u_1 + u_2 + \dots + u_n > B,$$

where

$$u_1, u_2, \dots, u_n$$

are any real quantities whatever, and if

$$a_1, a_2, \dots, a_n$$

be a series of positive quantities which never increase as  $n$  increases, then

$$a_1 A > a_1 u_1 + a_2 u_2 + \dots + a_n u_n > a_1 B.$$

(b) Hence prove Dirichlet's theorem that if  $\sum u_n$  be convergent or oscillatory, and  $a_1, a_2, \dots, a_n$  be a series of positive quantities which never increase as  $n$  increases and if

$$\lim_{n \rightarrow \infty} a_n = 0,$$

then  $\sum a_n u_n$  is convergent.

4. (a) Define uniform convergence and illustrate by an example.

(b) Prove that if the terms of  $\sum |f(n, z)|$  are ultimately less than the terms of a converging series of positive terms whose values are independent of  $z$ , then  $\sum f(n, z)$  converges uniformly.

(c) Illustrate by examples that discontinuity of  $\sum f(n, z)$  is necessarily accompanied by non-uniformity of convergence. Is the converse true?

5. (a) If  $\frac{p_n}{q_n}$  be the  $n$ th convergent of the continued fraction

$$a_1 + \frac{1}{a_2 + \frac{1}{a_3 + \dots \frac{1}{a_n + \dots}}}$$

prove that

$$(i) \quad p_n = a_n p_{n-1} + p_{n-2}, \quad q_n = a_n q_{n-1} + q_{n-2},$$

$$(ii) \quad \frac{p_n}{p_{n-1}} = a_n + \frac{1}{a_{n-1} + \frac{1}{a_{n-2} + \dots + \frac{1}{a_1}}},$$

$$(iii) \quad \frac{q_n}{q_{n-1}} = a_n + \frac{1}{a_{n-1} + \frac{1}{a_{n-2} + \dots + \frac{1}{a_1}}}.$$

- (b) Prove that

$$\left(x + \frac{1}{2x + \dots}\right)^2 - \left(x - \frac{1}{2x - \dots}\right)^2 = 2.$$



## SECOND PAPER

*The questions are of equal value**Six questions carry full marks*

1. (a) A light spring is kept compressed by the action of a given force ; the force is suddenly reversed. Prove that the greatest subsequent extension of the spring is three times its initial contraction.

(b) A point  $P$  describes an equiangular spiral with constant angular velocity about the pole  $O$ . Show that its acceleration varies as  $OP$  and is in a direction making with the tangent at  $P$  the same constant angle that  $OP$  makes.

2. (a) Show that for a central orbit

$$P = \frac{h^2}{p^3} \frac{dp}{dr}.$$

(b) Show that the force tending in a given direction by which a conic can be described varies inversely as the cube of the chord along which the force acts.

3. A heavy particle is suspended from a fixed point by a string of length  $a$ . A horizontal velocity  $v_0$  is suddenly communicated to the particle so that it begins to describe a vertical circle. Determine whether the particle will oscillate or the string becomes slack.

If the particle, instead of being suspended by a string, were constrained to move like a bead on a vertical circle of radius  $a$  how will you modify your answer?

4. A particle is describing an ellipse under force  $\frac{\mu}{r^2}$  to a focus. When the particle is at the extremity of the latus rectum through the focus this centre of force is removed and is replaced by a force  $\mu'r'$  at the centre of the ellipse. Prove that if the particle continue to describe the same ellipse  $a'b' = \mu a$ .

5. (a) Obtain the accelerations of a moving point referred to rectangular axes which revolve in any manner about the origin in their own plane.

(b) A thin straight smooth tube revolves with angular velocity  $\omega$  in a horizontal plane about one extremity which is fixed : if at zero time a particle inside it be at a distance  $a$  from the fixed end and moving with velocity  $V$  along the tube, shew that its distance at time  $t$  is

$$a \cosh \omega t + \frac{V}{\omega} \sinh \omega t.$$

6. (a) Discuss the motion where the mass moving varies.

(b) A chain of length  $l$  is coiled at the edge of a table. One end is fastened to a particle whose mass is equal to that of the whole chain and the other end is put over the edge. Find the velocity of the particle immediately after leaving the table.

7. (a) A number of forces act in one plane upon a rigid body. Show that if the sum of the virtual works of the forces vanishes for every virtual displacement the system is in equilibrium.

(b) Six equal heavy bars are freely jointed at their extremities : one bar is fixed in a horizontal position and the system hangs in a vertical plane ; the middle points of each pair of adjacent non-horizontal bars are connected by two strings in a state of tension. Show that if the hexagon is regular in its position of equilibrium the tension of each string is three times the weight of a bar.

8. (a) Find the centroid of the area included by a parabola and two tangents.

(b) Find the centre of mass of a quadrant of an ellipse included by the semi-axes, the density at any point being proportional to the product of the co-ordinates of this point.

9. (a) A uniform chain hangs over two smooth pegs in the same horizontal line and at a given distance apart; find the length of the chain when the pressure on each peg is minimum.

(b) An inextensible string is resting on a rough plane curve in limiting equilibrium, there being no external force continuously applied. Show that as the angle through which the string turns increases in Arithmetic progression, the tension decreases in Geometrical progression.

10. Determine the laws of attraction for which the attraction of a uniform spherical shell on any external particle is the same as if the shell were condensed into an infinitely small particle at its centre.

11. Find the amount of work done in a material system self-attracting according to the Newtonian law when the form of the system is altered.

Find the amount of work in scattering the particles of a given self-attracting system to infinite distances from each other.

12. Find the potential of a homogeneous ellipsoid at its centre. Express your result in a symmetrical form.

### THIRD PAPER

*The questions are of equal value*

*You are required to attempt the TENTH question; full marks may be obtained by answering that question and ANY FIVE of the remaining questions*

1. (a) Show that the length of the perpendicular from the point  $(\alpha_1, \beta_1, \gamma_1)$  on the straight line  $la + m\beta + n\gamma = 0$  is

$$\frac{la_1 + m\beta_1 + n\gamma_1}{(l^2 + m^2 + n^2 - 2mn \cos A - 2nl \cos B - 2lm \cos C)^{\frac{1}{2}}}$$

(b) If  $p, q, r$  are the lengths of the perpendiculars drawn from the vertices of the triangle of reference upon any straight line, prove that

$a^2p^2 + b^2q^2 + c^2r^2 - 2bcqr \cos A - 2carp \cos B - 2abpq \cos C = 4\Delta^2$ , where  $\Delta$  is the area of the triangle of reference.

2. (a) Show that, by properly choosing the triangle of reference the co-ordinates of any four points no three of which lie on a straight line may be written in the form  $\pm f, \pm g, \pm h$ , and hence deduce the harmonic property of the complete quadrilateral.

(b) Show that the middle points of the three diagonals of a quadrilateral lie on a straight line.

State the general theorem of which this is a particular case.

3. (a) Establish the equation of the asymptotes of the conic

$$f(a, \beta, \gamma) = ua^2 + v\beta^2 + w\gamma^2 + 2u'\beta\gamma + 2v'\gamma a + 2w'a\beta = 0$$

in the form

$$u \quad w' \quad v' \quad a \quad \times f(a, \beta, \gamma) + \quad \times (aa + b\beta + c\gamma)^2$$

$$u' \quad w \quad c$$

$$v' \quad u' \quad w$$

$$= 0$$

$$= 0.$$

(b) One asymptote of a conic circumscribing the triangle of reference is  $la + m\beta + n\gamma = 0$ , find the equation of the other asymptote.

4. (a) Show that a system of coaxial circles may be reciprocated into a system of confocal conics.

(b) Prove by reciprocation that a common tangent to two circles subtends a right angle at either limiting point.

(c) If  $abc = fgh$ , prove that any one of the conics  
 $ax^2 + 2fyx = 0$ ,  $by^2 + 2gzx = 0$ ,  $cz^2 + 2hxy = 0$   
 is the polar reciprocal of a second with respect to the third.

5. (a) Give a method for simultaneously projecting a conic into a circle and any point in the plane of the conic into the centre of the circle.

(b) Prove by projection that if two triangles are selfconjugate with respect to a conic their six vertices lie on a conic.

6. (a) If  $\theta = 0$ , prove that an infinite number of triangles self-conjugate to  $S$  can be inscribed in  $S'$ , and hence show that the circum-circle of a triangle self-conjugate with regard to a conic cuts the director circle orthogonally.

(b) Show that the two conics  $S = 0$  and  $S' = 0$  will touch each other if

$$(\theta\theta' - 9\Delta\Delta')^2 = 4(\theta^2 - 3\Delta\theta')(\theta'^2 - 3\Delta'\theta).$$

7. (a) Prove that all curves of the  $n$ th degree which pass through  $\frac{1}{2}n(n+3) - 1$  points pass also through  $\frac{1}{2}(n-1)(n-2)$  other fixed points, and hence or otherwise show that the tangents at four collinear points of a quartic meet the curve again in eight points lying on a conic.

(b) Show that a proper curve of the  $n$ th degree cannot have more than  $\frac{1}{2}(n-1)(n-2)$  double points.

8. (a) Show that every node on a curve is a node on the Hessian with the same nodal tangents. Find the Hessian of  $x^2y + y^2z + z^2x = 0$ , in its simplest form.

(b) If the first polar of a point  $A$  has a double point at  $B$ , show that the polar conic of  $B$  has a double point at  $A$ .

9. Write a short note on Quadric Inversion, showing that Circular Inversion is a particular case of Quadric Inversion.

If a curve be inverted from any point, show that the inverse points of the foci of the original curve are foci of the inverse curve.

10. (a) If the vertices  $B$  and  $C$  of the triangle of reference are points of inflexion on a cubic show that its equation may be written as

$$(x + nz)(x + my)(x + \mu y + \nu z) = \lambda x^3,$$

and hence prove that a cubic cannot have more than three real points of inflexion.

(b) If  $\theta^2 = 1$ , show that the straight lines

$$\theta x + \theta^2 y + z = 0$$

are inflexional tangents of  $x^3 + y^3 = 3axy$ .

Find the straight line on which the corresponding points of contact lie and hence deduce that every nodal cubic can be projected into the Folium of Descartes.

11. (a) Define a Flecnode and a Biflecnode. What are their reciprocals?

Show that if a trinodal quartic has two biflecnodes, the third node also must be a biflecnode.

(b) Define a Bicircular Quartic, and show that there are sixteen foci of a Bicircular Quartic which lie on four circles and four on each circle.

12. (a) Prove that in general a Cartesian has eight points of inflexion lying on a circular cubic.

(b) Trace the curve

$$r^2 = 2a^2 \cos 2\theta,$$

and show that it is of order four with three biflecnodes, two of which lie at the circular points at infinity.



## FOURTH PAPER

*The questions are of equal value*

*Full marks for ANY SIX questions*

1. Prove that all straight lines which intersect the three lines  $y-z=1$ ,  $x=0$ ;  $z-x=1$ ,  $y=0$ ;  $x-y=1$ ,  $z=0$ , lie on the surface.

$$x^2 + y^2 + z^2 - 2yz - 2zx - 2xy = 1$$

Interpret the equation

$$(x^2 + y^2 + z^2)(l^2 + m^2 + n^2) = (lx + my + nz)^2,$$

and give a geometrical illustration.

2. Show how, by the method of projection, the nature of the section of a conicoid made by any given plane may be determined.

Is this method always applicable? Can you suggest any other method for the purpose?

Prove that the section of the surface  $yz + zx + xy = a^2$  by the plane  $lx + my + nz = p$  will be a parabola if

$$l^2 + m^2 + n^2 = 0.$$

Discuss the case when the section may be a circle.

3. Define an *Equilateral Hyperboloid*.

Prove that the four perpendiculars from the vertices on the opposite faces of any tetrahedron are generators of one system and the four perpendiculars to the faces at their orthocentres are generators of the other system of an *Equilateral Hyperboloid*.

4. Prove that a central quadric has in each of its principal planes a focal conic *confocal* with its corresponding principal section.

Prove further that the focal and dirigent conics are reciprocals of each other with respect to the principal section and the line joining the foot of any directrix with the corresponding focus is a normal to the focal conic.

5. Prove that four cones belong to the cluster of conicoids having the same base passing through eight arbitrary points and that the vertices of these cones are the angular points of a tetrahedron *self-polar* for all conicoids of the cluster.

Point out the exceptional cases, if any, and discuss the case when the base is the intersection of two rectangular hyperboloids.

6. Explain the principles of point reciprocation and shew that the reciprocal of a cone is a plane curve.

Prove that the sections by any plane of two reciprocal cones, having a common vertex, are polar reciprocals with regard to the foot of the perpendicular on that plane from the common vertex.

7. Explain fully why the rectifying developable of a twisted curve is so called and shew that the curve is a geodesic on it.

Prove that the rectifying developable of a curve is the polar developable of its involutes and conversely.

8. Prove that the geodesic torsion of a curve on a surface is given by the equation

$$\frac{1}{T} = \frac{(FL - EM)dp^2 + (GL - EN)dpdq + (GM - FN)dq^2}{V(Edp^2 + 2Fdpdq + Gdq^2)}$$

where  $E, F, G$  and  $L, M, N$  are the coefficients of the first and second quadratic forms of the surface respectively.

Prove that

$$\frac{1}{T} = \frac{1}{2} \left( \frac{1}{\rho_1} - \frac{1}{\rho_2} \right) \sin 2\theta$$

where  $\rho_1, \rho_2$  are the principal radii of curvature of the surface at the point and  $\theta$  the angle the curve makes with one of the lines of curvature.

9. Verify that the lines of curvature on the quadric

$$\frac{y^2}{b} + \frac{z^2}{c} = 4x$$

are the intersections by the confocal quadrics

$$\frac{y^2}{b-p} + \frac{z^2}{c-p} = 4(x-p),$$

and find expressions for their principal radii of curvature.

10. Prove that for a ruled surface if  $\phi$  be the angle which a tangent plane at a generator makes with the tangent plane at the point of intersection of the same generator with the line of striction,  $\tan \phi$  is proportional to the distance between the two points.

Prove that the normals to a ruled surface along a generator form a hyperbolic paraboloid.

11. Prove the Serret-Frenet formulæ for a twisted curve.

If a curve be such that the tangent has a constant inclination to a fixed direction, prove that the ratio of its curvatures is a constant.

## FIFTH PAPER

Answer six questions only

The figures in the margin indicate full marks

1. (a) Prove that a continuous function defined in a closed interval attains its upper bound in that interval. 15

(b) Examine the continuity at an irrational point of  $f(x)$ , where

$$f(x) = \frac{1}{n}, \text{ when } x = \frac{m}{n} \text{ in its lowest terms,}$$

$$f(x) = 0, \text{ when } x \text{ is irrational}$$

2. If the function  $f(x)$  and its successive differential coefficients  $f'(x)$ ,  $f''(x)$ , ...,  $f^{(n-1)}(x)$  are all continuous in the closed interval  $(a, a+h)$  and  $f^{(n)}(x)$  has a finite value at every point in the open interval  $(a, a+h)$ , then will 20

$$f(a+h) = f(a) + hf'(a) + \frac{h^2}{2!}f''(a) + \dots + \frac{h^{n-1}}{(n-1)!}f^{(n-1)}(a) \\ + \frac{h^n(1-\theta)^{n-1}}{(n-1)(n-1)!}f^{(n)}(a+\theta h),$$

where  $0 < \theta < 1$  and the number  $p$ , not necessarily an integer is such that  $n-p > 0$ . Indicate the steps in your proof where you utilize the conditions of the theorem.

If  $f(x+h) - f(x) = hf'(x+\theta h)$  and  $f^{(r)}(x)$  is the first of the differential coefficients  $f''(x)$ ,  $f'''(x)$ , ..... which does not vanish, then will

$$\lim_{h \rightarrow 0} \theta = r^{1-r},$$

Prove also that if  $\theta$  be the same for all values of  $h$  and  $x$ , then  $\theta = \frac{1}{2}$  and  $f''(x) = \text{a constant}$ .

8. Explain how you can obtain the *extrema* of the function  $\phi(x_1, x_2, \dots, x_n)$ , where the  $m$  variables are connected by the  $n$  relations

$f_r(x_1, x_2, \dots, x_n) = 0$ ,  
 $r=1, 2, \dots, n$  and examine how you can distinguish the maximum from the minimum values.

A plane triangle ABC, right-angled at B and of given perimeter P revolves round an axis through A parallel to BC or round an axis through C parallel to BA, and the solid generated is a maximum; shew that the three sides of the triangle are equal to

$$\frac{3P}{8}(-3 + \sqrt{17}), \frac{P}{4}(5 - \sqrt{17}), \frac{P}{8}(7 - \sqrt{17}).$$

4. If  $u_1, u_2, \dots, u_n$  denote  $n$  functions of  $n$  independent variables  $x_1, x_2, \dots, x_n$ , then in order that there may exist between these  $n$  functions a relation  $F(u_1, u_2, \dots, u_n) = 0$  which does not explicitly contain any of the variables  $x_1, x_2, \dots, x_n$ , it is necessary and sufficient that the Jacobian

$$\frac{D(u_1, u_2, \dots, u_n)}{D(x_1, x_2, \dots, x_n)} = 0.$$

Prove this theorem.

If  $u_1 = \cos x_1, u_2 = \sin x_1 \cos x_2, u_3 = \sin x_1 \sin x_2 \cos x_3, \dots, u_n = \sin x_1 \sin x_2 \dots \sin x_{n-1} \cos x_n$ , then will

$$\begin{aligned} \frac{D(u_1, u_2, \dots, u_n)}{D(x_1, x_2, \dots, x_n)} \\ = (-1)^n \sin^n x_1 \sin^{n-1} x_2 \sin^{n-2} x_3 \dots \sin^2 x_{n-1} \sin x_n. \end{aligned}$$

8. Write an essay on the Reimann Integral of a bounded function in a finite interval.

6. How do you define an integral when either the interval of integration or the integrand becomes infinite?

Examine for convergence the integral

$$\int_0^1 \frac{x^{m-1} dx}{1+x}.$$

Prove that

$$\int_0^1 x^{l-1} (1-x)^{m-1} dx = \frac{\Gamma(l)\Gamma(m)}{\Gamma(l+m)}$$

and evaluate

$$\int_0^1 (n-x)^{m-1} (b-x)^{l-m-1} dx, 0 < l, 0 < m, 0 < a < b.$$

7. If  $\iint_R f(x, y) dx dy$  exists, where the field of integration R is the

rectangle bounded by  $x=a, x=b$  and  $y=c, y=d$ , and if also  $\int_a^b f(x, y) dx$  exists for each value of  $y$  in  $(c, d)$ , then shew that the repeated integral

$$\int_c^d dy \int_a^b f(x, y) dx$$

exists and that

$$\iint_R f(x, y) dx dy = \int_c^d dy \int_a^b f(x, y) dx.$$

Deduce that if the double integral

$$\iint_R f(x, y) \, dx \, dy$$

exists, the two repeated integrals

$$\int_a^b dy \int_a^b f(x, y) \, dx \quad \text{and} \quad \int_a^b dx \int_a^b f(x, y) \, dy$$

cannot exist without being equal.

Give an example to shew that it is not always permissible to change the order of integration of the repeated integral

$$\int_a^b dx \int_a^d f(x, y) \, dy,$$

$a, b, c, d$  being constants.

8. Calculate the line integral of the function  $f(x, y)$  along the portion of the arc of the curve  $y = x^n$  lying between the points  $(0, 0)$ ,  $(1, 1)$ , where 18

$$f(x, y) = \frac{x^m}{(1-y)^{\frac{m}{n}}}.$$

Transform

$$\iiint \left( \frac{1}{y} - \frac{1}{z} \right) \left( \frac{1}{z} - \frac{1}{x} \right) \left( \frac{1}{x} - \frac{1}{y} \right) dx \, dy \, dz$$

into another triple integral in which the variables are  $u, v, \omega$ , where

$$u^3 = xyz, \quad \frac{1}{v} = \frac{1}{x} + \frac{1}{y} + \frac{1}{z}, \quad \omega^3 = x^3 + y^3 + z^3.$$

9. If the series  $\sum_{n=1}^{\infty} a_n$  and  $\sum_{n=1}^{\infty} b_n$  are absolutely convergent, prove that the trigonometric series 16

$$\frac{1}{2} a_0 + \sum_{n=1}^{\infty} (a_n \cos nx + b_n \sin nx)$$

is the Fourier series of its sum in  $-\pi \leq x \leq \pi$ .

Determine the Fourier series for  $f(x)$ , where

$$f(x) = -\frac{\pi}{4}, \quad \text{when } -\pi < x < 0$$

$$= \frac{\pi}{4}, \quad \text{when } 0 < x < \pi$$

$$= 0, \quad \text{when } x = 0, \pm\pi.$$

10. (a) Determine the most general polynomial  $P(x)$  of the 5th degree so that the integral 18

$$\int \frac{P(x) \, dx}{x^3(x^4+1)^{\frac{1}{4}}}$$

may be a rational function of  $x$ .

(b) Evaluate any one of the following :—

$$(i) \int \frac{(1-x^2)dx}{(1+x^2)\sqrt{1+x^2}}.$$

$$(ii) \int_{-1}^1 \frac{dx}{\sqrt{(1-2ax+a^2)} \sqrt{(1-2\beta x+\beta^2)}}, \text{ where } a\beta > 0.$$

11. If  $\lambda, \mu, \nu$  be the orthogonal curvilinear co-ordinates of a point whose rectangular cartesian co-ordinates are  $x, y, z$ ; prove that 18

$$\Delta^2 V = LMN \left[ \frac{\partial}{\partial \lambda} \left( \frac{L}{MN} \frac{\partial V}{\partial \lambda} \right) + \frac{\partial}{\partial \mu} \left( \frac{M}{LN} \frac{\partial V}{\partial \mu} \right) + \frac{\partial}{\partial \nu} \left( \frac{N}{LM} \frac{\partial V}{\partial \nu} \right) \right],$$

where  $\Delta^2$  stands for  $\frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2}$  and

$$L^2 = \left( \frac{\partial \lambda}{\partial x} \right)^2 + \left( \frac{\partial \lambda}{\partial y} \right)^2 + \left( \frac{\partial \lambda}{\partial z} \right)^2,$$

$$M^2 = \left( \frac{\partial \mu}{\partial x} \right)^2 + \left( \frac{\partial \mu}{\partial y} \right)^2 + \left( \frac{\partial \mu}{\partial z} \right)^2,$$

$$N^2 = \left( \frac{\partial \nu}{\partial x} \right)^2 + \left( \frac{\partial \nu}{\partial y} \right)^2 + \left( \frac{\partial \nu}{\partial z} \right)^2.$$

12. Prove that

18

$$\frac{\partial}{\partial a} \int_a^b f(x, a) dx = \int_a^b \frac{\partial}{\partial a} f(x, a) dx,$$

on the assumption that

$$f, \frac{\partial f}{\partial a}, \frac{\partial^2 f}{\partial a^2}$$

are continuous within the range of integration, and that  $a, b$  are finite constants.

If

$$F(a) = \int_0^a \frac{\phi(x) dx}{\sqrt{a-x}},$$

then prove that

$$F'(a) = \int_0^a \frac{\phi'(x) dx}{\sqrt{a-x}}, \dots$$

if  $\phi(0) = 0$ .

## SIXTH PAPER

*The questions are of equal value**six questions are to be attempted*

1. (a) Solve the equation

$$p^2 = 4y(xp - 2y)^2;$$

obtain the singular solution and explain the relation of the equation  $y=0$  to the differential equation.

- (b) Completely solve the equation

$$(\sin x - x \cos x) \frac{d^2y}{dx^2} - x \sin x \frac{dy}{dx} + y \sin x = x.$$

when  $A \sin x$  is a term of the complementary function.

2. (a) Prove that, if a particular solution of the equation

$$\frac{dy}{dx} + Py^2 + Q = 0$$

be known,  $P$  and  $Q$  being functions of  $x$ , the primitive can be obtained.

Hence solve the equation

$$\frac{dy}{dx} + y^2 \sin x = 2 \tan x \sec x.$$

- (b) Find the equation of a system of curves which cut a system of concentric circles at a given angle
- $\alpha$
- .

Deduce the equation when  $\alpha = \frac{\pi}{2}$  and interpret the result geometrically.

3. Solve the equations :—

$$(a) \quad y \frac{d^2y}{dx^2} - \left( \frac{dy}{dx} \right)^2 = y^3 \log y.$$

$$(b) \quad yzdx = zxdy + y^2dz.$$

$$(c) \quad x^2(y-z)p + y^2(z-x)q = z^2(x-y).$$

4. (a) Obtain the most general solution of the equation

$$xdx + ydy + c \left( 1 - \frac{x^2}{a^2} - \frac{y^2}{b^2} \right)^{\frac{1}{2}} dz = 0,$$

which is consistent with the relation

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1,$$

and interpret the result geometrically.

- (b) Prove that the equation

$$(x-a)p + (y-b)q = z-c$$

represents a family of cones with the vertex at the fixed point  $(a, b, c)$ . Shew that the member of the family, which passes through the circle  $x^2 + y^2 = 1$  in the plane of  $xy$ , has for its equation

$$(ax - cx)^2 + (bx - cy)^2 = (z - c)^2.$$

5. (a) Find the Complete Integral of the equation

$$p^2 + q^2 - 2px - 2qy + 2xy = 0,$$

and deduce the General Integral from the result. Find also the Singular Integral, if there be any.

(b) Integrate the equation

$$q^2 r - 2pqs + p^2 t = 0.$$

6. Establish the formula

$$P_n(x) = \frac{1}{2^n \cdot n!} \frac{d^n}{dx^n} \left\{ (x^2 - 1)^n \right\}.$$

Prove that

$$\frac{dP_n}{dx} = (2n-1)P_{n-1} + (2n-5)P_{n-3} + (2n-9)P_{n-5} + \dots,$$

and hence find the value of

$$\int_{-1}^1 \left( \frac{dP_n}{dx} \right)^2 dx.$$

7. Prove that

$$(a) \quad \frac{1 - h^2}{(1 - 2\mu h + h^2)^{\frac{3}{2}}} = \sum_{n=0}^{\infty} (2n+1) P_n(\mu) h^n,$$

$$(b) \quad \int_{-1}^1 \frac{P_n(\mu)}{(1 + k\mu^2)^{n+\frac{1}{2}}} d\mu = \frac{2}{2n+1} \cdot \frac{(-k)^n}{(1+k)^{n+\frac{1}{2}}},$$

where

$$-1 < k < 1.$$

8. Prove that

$$P_n(\mu) Q_{n-1}(\mu) - P_{n-1}(\mu) Q_n(\mu) = \frac{1}{n},$$

and

$$\mu \frac{dQ_n(\mu)}{d\mu} - \frac{dQ_{n-1}(\mu)}{d\mu} = nQ_n(\mu).$$

9. Prove that, for positive integral values of  $n$  and  $m$ ,

$$P_n^{m+1}(\mu) - \frac{2(m+1)\mu}{\sqrt{1-\mu^2}} P_n^{m+1}(\mu) + (n-m)(n+m+1) P_n^m(\mu) = 0,$$

and

$$P_n^m(\mu) = \frac{(n+m)!}{n!} \cdot \frac{e^{-\frac{m\pi i}{2}}}{\pi} \int_0^\pi \{ \mu + \sqrt{\mu^2 - 1} \cos \phi \}^n \cos m\phi d\phi.$$

10. (a) By writing  $\cot \theta' = \cot \theta - h \operatorname{cosec} \theta$  and expanding  $\sin \theta'$  in powers of  $h$  by Taylor's theorem, shew that

$$P_n(\cos \theta) = \frac{(-1)^n}{n!} \operatorname{cosec}^{n+1} \theta \frac{d^n (\sin \theta)}{d(\cot \theta)^n}.$$

(b) Find the potential of a uniform circular wire at any point  $(r, \theta, \phi)$ .

## SEVENTH PAPER

## (FINITE DIFFERENCES—FIRST PAPER)

*The questions are of equal value**Full marks for any six questions*

1. Explain the nature of the Calculus of Finite Differences and give reasons why the value usually given to the difference of the independent variable is unity.

Prove that if  $u_x$  be a rational and integral function of  $x$  of the  $n$ th degree, its  $n$ th differences are constant.

Prove  $\Delta x^{-n} = -nx^{-n-1}.$

2. Prove that

$$F(E)a^x\phi(x) = a^x F(aE)\phi(x),$$

If

$$P_n = \frac{1}{1.n} + \frac{1}{2.(n-1)} + \dots + \frac{1}{n-1}$$

show that

$$(P_1 \Delta^2 - P_2 \Delta^3 + \dots) 0^n = 0 \text{ if } n > 2.$$

3. Sum the series

$$1 + a \cos \theta + a^2 \cos 2\theta + \dots + a^{n-1} \cos (n-1)\theta.$$

Prove

$$\begin{aligned} \frac{2}{1.3.4} + \frac{3}{2.4.5} + \frac{4}{3.5.6} + \dots + n \text{ terms} \\ = \frac{17}{36} - \frac{6n^2 + 21n + 17}{6(n+1)(n+2)(n+3)}. \end{aligned}$$

4. Sum the series of which the  $x$ th term is

$$u_x = \tan^{-1} \frac{1}{10x^2 - 24x + 12}.$$

Prove

$$\Sigma u_x = C + xu_{x-1} - \frac{x(x-1)}{1.2} \Delta u_{x-2} + \frac{x(x-1)(x-2)}{1.2.3} \Delta^2 u_{x-3} - \dots$$

5. Develop  $\Sigma u_x$  in the following form

$$\Sigma u_x = C + \int u_x dx - \frac{1}{2} u_x + \frac{B_1}{2!} \frac{du_x}{dx} - \frac{B_2}{4!} \frac{d^2 u_x}{dx^2} + \dots$$

where  $B_1, B_2$ , etc., are Bernoulli's numbers.

If  $B_{n-1}$  be the  $n$ th of Bernoulli's numbers, shew that

$$B_{n-1} = (-1)^{n+1} \left\{ 1 - \frac{\Delta}{2} + \frac{\Delta^2}{8} - \dots \right\} 0^{n-1}.$$



6. Prove that Gregory-Laplace formula for numerical integration

$$\int_a^b u_x dx = \frac{u_0}{2} + u_1 + u_2 + \dots + \frac{u_n}{2} - \frac{1}{12}(\Delta u_{n-1} - \Delta u_0) \\ - \frac{1}{24}(\Delta^2 u_{n-1} + \Delta^2 u_0) - \dots$$

7. Prove Herschel's theorem :-

$$\phi(e') = \phi(1) + \phi(E). 0t + \phi(E). 0^2. \frac{t^2}{2!} + \dots$$

and hence deduce

$$\Delta^n u = \frac{d^n u}{dx^n} + \frac{\Delta^n 0^{n+1}}{(n+1)!} \frac{d^{n+1} u}{dx^{n+1}} + \frac{\Delta^n 0^{n+2}}{(n+2)!} \frac{d^{n+2} u}{dx^{n+2}} + \dots$$

If  $x = e^{\theta}$ , prove that

$$\left( \frac{d}{d\theta} \right)^n + \frac{\Delta 0^n}{1} x \frac{d}{dx} + \frac{\Delta^2 0^n}{2!} x^2 \frac{d^2}{dx^2} + \frac{\Delta^3 0^n}{3!} x^3 \frac{d^3}{dx^3} + \dots$$

8. Prove that following Newton's formula of interpolation with divided differences

$$f(x) = f(x_0) + (x-x_0)f_1(x_0, x_1) + (x-x_0)(x-x_1)f_2(x_0, x_1, x_2) + \dots \\ \dots + (x-x_0)\dots(x-x_{n-1})f_n(x_0, \dots, x_n) \\ + \frac{(x-x_0)\dots(x-x_n)}{(n+1)!} f^{n+1}(E),$$

where E lies between the max. and the min. of  $x_0, x_1, \dots, x_n, x$ ,  $f(x)$  being a function of  $x$  with finite and continuous derivatives.

9. Explain the relative advantages of Newton's, Stirling's, and Bessel's formulae of interpolations.

Use any suitable method to interpolate the value of  $f(x)$  when  $x = .34$  from the following table :-

$x$	0.1	0.2	0.3	0.4	0.5
$f(x)$	0.90484	0.81873	0.74082	0.67092	0.60653

10. What is inverse interpolation and extrapolation? Explain

Calculate the real root of the equation

$$x^3 + 2x - 5 = 0$$

inverse interpolation.

## EIGHTH PAPER

## (FINITE DIFFERENCES—SECOND PAPER)

N.B.—You are required to attempt the SIXTH and ELEVENTH questions; full marks may be obtained by answering these TWO and ANY FOUR of the remaining questions.

1. Solve any three of the following equations :—

(a)  $y_{x+3} + a^3 y_x = \cos mx.$

(b)  $y(x+2) - 2my(x+1) + (m^2 + n^2)y(x) = m^x.$

(c)  $y_x = x(y_{x-1} + y_{x-2}).$

(d)  $\frac{dy_{x+1}}{dx} - a \frac{dy_x}{dx} + (x-n)y_{x+1} - axy_x = 0.$

2. (a) Solve the equations

$$u_{x+1} = (n - m^2)(v_x + u_x)$$

$$v_{x+1} = (2m + 1)v_x + u_x$$

and show that if  $m$  be the integral part of  $\sqrt{n}$ ,

$\frac{u_x}{v_x}$  converges, as  $x$  increases, to the decimal part of  $\sqrt{n}$ .

(b) Given that a particular solution of the equation

$$u_{x+2} - a(a^x + 1)u_{x+1} + a^{x+1}u_x = 0$$

is  $u_x = ba \frac{x(x-1)}{2}$

deduce the general solution; and also show that the above equation may be solved without the previous knowledge of a particular integral.

8. (a) If

$$\Pi \equiv x \frac{\Delta}{\Delta x}, \text{ and } \rho \equiv xE,$$

show that

(i)  $f(\Pi)\rho^m u = \rho^m f(\Pi + m)u,$

(ii)  $f(\Pi)\rho^m = f(m)\rho^m.$

(b) Solve the following equation in descending factorials :—

$$(x-a)u_x - (2x-a-1)u_{x-1} + (1-q^2)(x-1)u_{x-2} = 0.$$

4. (a) Solve

$$u_{x+2,y} - 8u_{x+1,y+1} + 8u_{x+1,y} - u_{x,y+2} - x = 0.$$

(b) Determine  $u_{x,t}$  from the equation

$$c^2 \frac{d^2}{dt^2} u_{x+1,t} = \Delta_x^2 u_{x,t},$$

and, assuming initial conditions,

$$u_{x,0} = ax + b, \quad \frac{d}{dt} u_{x,0} = a'x^r,$$

show that

$$\frac{d}{dt}u_{r+1} = A\lambda^r (\mu^r + \mu^{-r})$$

where  $A$ ,  $\lambda$ , and  $\mu$  are constants.

5. (a) Solve the equations

$$\left. \begin{aligned} \phi(x+y) &= \phi(x) \cdot \phi(y) - \phi(x)\psi(y) \\ \psi(x+y) &= \psi(x) \cdot \psi(y) - \psi(x)\phi(y) \end{aligned} \right\}$$

(b) Determine the curve which possesses the following property : If from a fixed point in the plane of the curve  $n$  straight lines are drawn making equal angles with one another and this bundle of lines is rotated round the fixed point, then the sum of the radii vectores remains constant.

6. Give the outline of a rigorous proof of the following theorem :—

If in a homogeneous linear difference-equation

$$u_{r+n} + p_r^{(n-1)}u_{r+n-1} + \dots + p_r^{(0)}u_r = 0$$

the coefficients

$$p_r^{(0)}, p_r^{(1)} \dots p_r^{(n-1)}$$

tend respectively to the finite values

$$a_0, a_1, \dots, a_{n-1}$$

as  $r$  tends to infinity along the positive real axis, and if the roots

$$a_1, a_2, \dots, a_n$$

of the characteristic equation

$$t^n + a_{n-1}t^{n-1} + \dots + a_0 = 0$$

are different from one another in their absolute values and indeed

$$|a_1| > |a_2| > \dots > |a_n|;$$

then in general

$$\lim_{r \rightarrow \infty} \frac{u_{r+1}}{u_r} = a_1.$$

7. Solve any one of the following equations :—

$$(i) \quad u_{r+1} - zu_r = e^{-r}.$$

$$(ii) \quad u_{r+1} + u_r = \frac{1}{r}.$$

8. Write an essay bringing out the analogies between difference-equations and differential equations.

9. Define standard deviation and prove that this is the least when measured from the arithmetic mean.

If  $z = x_1 + x_2 + x_3 + \dots + x_n$ , where the  $x$ 's are deviations from the average of quantities selected at random and independently of each other from a curve frequency whose standard deviation is  $\sigma$ , show that the standard deviation of  $z$  is  $\frac{\sigma}{\sqrt{n}}$ ,  $n$  being finite.

## 10. Establish Newton's difference formula for interpolation.

How should you modify it if no stress is to be laid on the end value?

Given the number of candidates (in thousands) enrolled at the different examinations of the University of Calcutta for the following years :—

1910	...	...	25.8
1915	...	...	28.5
1920	...	...	32.9
1925	...	...	34.6
1930	...	...	35.4

Estimate the number of candidates enrolled for the year 1928.

## 11. Explain what is meant by the coefficient of correlation between two sets of variables and show that this coefficient lies between +1 and -1.

Prove that if the means of rows and of columns of correlation table lie on two straight lines, the equations to these lines are

$$x = r \frac{\sigma_x}{\sigma_y} y, \quad y = r \frac{\sigma_y}{\sigma_x} x$$

respectively,  $x$  and  $y$  being deviations of the variables from their arithmetic means,  $r$  the coefficient of correlation, and  $\sigma_x, \sigma_y$  the standard deviations.

## SEVENTH PAPER

## (THEORY OF FUNCTIONS OF A REAL VARIABLE—FIRST PAPER)

N.B.—You are required to attempt the FOURTH and EIGHTH question; full marks may be obtained by answering these TWO and ANY FOUR of the remaining questions.

1. Shew that Cantor's theory of convergent sequences of rational numbers leads to an extension of their domain, whereas the corresponding theory fails to do the same for the domain of real numbers.

Indicate how you can obtain a Dedekind Section corresponding to a given convergent sequence of rational numbers.

2. How do you define the successive transfinite derivatives of a given set of points? Construct a set  $E$  whose transfinite derivative  $E^{(\omega \cdot 3 + n)}$  consists of the single point zero.

Prove that a set of the *second species* is enumerable if one of its transfinite derivatives is so.

3. Enunciate and prove Heine-Borel theorem in the linear domain. Generalize the theorem in the same domain.

Construct an enumerable set whose first derivative is a given closed set.

How do you define the *metric density* of a set  $E$  and when is a set to be *metrically dense*? Give an example of a non-dense set which has a non-vanishing component *metrically dense-in-itself*.

Prove that a set of points at which a set  $E$  is metrically dense is closed.

5. How does Borel define a complete limiting set (*ensemble-limite complet*)? Give an illustration of such a set.

Prove the following :—

(i) The exterior measure of a set is not less than its interior measure.

(ii) If among the measurable sets  $E_r$  ( $r=1, 2, 3, \dots$ ), all lying in the finite interval  $(a, b)$ , there is an infinite number each of whose measure  $\geq k$ , then the complete limiting set of  $E_r$  has also its measure  $\geq k$ . State the analogue in the case of a bounded limiting set.

6. Define the expressions : *ordinary discontinuity*, *discontinuity of the second kind*, *saltus*, as used in the theory of functions of a single real variable. Illustrate each definition by an example.

Prove the following theorem : The set of points at which a function  $f(x)$  has ordinary discontinuities is enumerable; whereas the set of points of discontinuity of the second kind for  $f(x)$  may be unenumerable.

7. What do you understand by the *absolute continuity* of a function  $f(x)$  in an interval  $(a, b)$ ?

Prove that every absolutely continuous function is of bounded variation. Give an example of a continuous function which is not of bounded variation.

8. Prove any two of the following statements :—

(i) If there is no distinction of right and left with regard to the derivatives of a function  $f(x)$  which is continuous in an interval  $(a, b)$ , then there exists a point, interior to the interval, at which a differential coefficient exists equal to

$$\frac{f(b)-f(a)}{b-a}.$$

(ii) The derivatives  $D^+f(x)$ ,  $D_+f(x)$  of a continuous function  $f(x)$  cannot have ordinary discontinuities on the right.

(iii) If  $f(x)$  is a measurable and finite function, the points at which  $D^+f(x)$ ,  $D_+f(x)$  are finite, and different from one another, form a set of measure zero.

9. For the function  $f(x)$ , given by

$$f(x) = \sum_{n=0}^{\infty} \frac{\cos(18^n x \pi)}{2^n},$$

prove any of the following properties :—

(i)  $f'(x)$  is non-existent for every value of  $x$ ;

$$(ii) \quad \lim_{h \rightarrow 0} \frac{f(x+h) - f(x-h)}{2h}$$

is existent at the points of an everywhere-dense set ;

(iii)  $f(x)$  has an infinite number of zeroes round the point  $x = \frac{1}{2}$ .

10. For the function, defined by saying that  $f(0, 0) = 0$  when  $x = 0, y = 0$ , and

$$f(x, y) = xy \cdot \frac{x^2 - y^2}{x^2 + y^2}$$

for all other points  $(x, y)$ , prove that

$$\frac{\partial^2 f}{\partial x \partial y} \text{ and } \frac{\partial^2 f}{\partial y \partial x}$$

are discontinuous at the point  $(0, 0)$  where both exist and are different.

Enunciate (without proof) a set of sufficient conditions for the equality of

$$\frac{\partial^2 f}{\partial x \partial y} \text{ and } \frac{\partial^2 f}{\partial y \partial x} \text{ at } (x_0, y_0).$$

## EIGHTH PAPER

## (THEORY OF FUNCTIONS OF A REAL VARIABLE—SECOND PAPER)

*The questions are of equal value**Full marks for ANY SIX questions*

1. Define an indefinite integral and prove that an indefinite integral is absolutely continuous and is of bounded variation in the interval for which it is defined.

2. Distinguish between a double integral and a repeated integral and give an example of a repeated integral for which the corresponding double integral does not exist.

A function  $f(x, y)$  is defined as follows for all points of the rectangle bounded by  $x=0$ ,  $x=1$ ,  $y=0$ ,  $y=1$ : If  $x = \frac{p}{2^m}$  and  $y = \frac{q}{2^n}$ , then  $f(x, y) = \frac{1}{2^m}$ , where  $p$  and  $q$  are any odd positive integers and  $m$  and  $n$  are any positive integers. At all other points  $f(x, y) = 0$ .

Find out whether the double integral

$$\int f(x, y) d(x, y)$$

exists.

8. Define an improper integral and a principal value according to Cauchy and write down the necessary and sufficient condition that the improper integral

$$\int_{-\infty}^{\infty} \frac{f(x)}{F(x)} dx$$

may exist.

Show that  $\int_{-\infty}^{\infty} \frac{q dx}{(ax+b)^2+c^2}$  exists and that

$$\int_{-\infty}^{\infty} \frac{(px+q) dx}{(ax+b)^2+c^2}$$

does not exist (where  $p$  is not zero), but a principal value exists and find this value.

4. Give a rigorous proof of the rule of integration by parts.

Or,

Prove the second mean value theorem of the Integral Calculus.

5. Define the Lebesgue integral of an unbounded function and show that the  $L$ -integral of an unbounded summable function is an absolutely convergent integral.

Given  $f(x) = \lim_{n \rightarrow \infty} f_n(x)$ , where  $f_n(x)$  is a pointwise discontinuous function.

Under what condition is  $f(x)$  summable?

6. Let  $f(x)$  be defined for the interval  $(a, b)$  and for this interval let it be single-valued, bounded and integrable  $R$ . Prove that it is integrable  $L$  and the two integrals are equal.

Give an example to show that the converse is not true.

Does the theorem hold when  $f(x)$  is no longer bounded? Illustrate your answer by an example.

7. Define Arzela's *convergenza uniforme a tratti* (uniform convergence by segments) and prove that this mode of convergence of a series  $\sum u_n(x)$  is the necessary and sufficient condition for the continuity of the sum-function of the series, each term  $u_n(x)$  being supposed to be continuous.

8. (a) State, without proof, the different sufficient conditions for the convergence of the Fourier series corresponding to a given function at a point.

(b) Prove Fejer's theorem on convergence (G, 1) of the Fourier series corresponding to a given function  $f(x)$  at a point.

9. Give an example of a bounded continuous function with a divergent Fourier series at  $x=0$ .

10. Prove that if  $f(x)$  is a summable function

$$\lim_{\tau=0} \int_{-\pi}^{\pi} |f(u+\tau) - f(u)| du = 0.$$

Deduce that

$$\lim_{n \rightarrow \infty} a_n = 0, \quad \lim_{n \rightarrow \infty} b_n = 0,$$

where  $a_n$  and  $b_n$  are the Fourier coefficients corresponding to  $f(x)$ .

11. State and prove Parseval's theorem.

## SEVENTH PAPER

### (MODERN GEOMETRY—FIRST PAPER)

*The questions are of equal value*

*ANY SIX questions carry full marks*

1. Show that two one-dimensional geometric forms, each consisting of three elements, are always projective.

Show also that any one-dimensional geometric form, consisting of four elements, is projective with any of the forms derived from it by interchanging the elements in pairs.

2. Show that two ranges on the same base, which have a single self-corresponding point lying at infinity, are directly equal.

Show also that two projective ranges which are superposed one upon the other, and which have two self-corresponding points, are composed of pairs of points which give with two fixed ones a constant anharmonic ratio.

3. Prove that the three pairs of opposite sides of a complete quadrangle are cut by any transversal in three pairs of conjugate points of an involution.

Show how to construct the sixth point  $C'$  of an involution of which five points  $A, A'; B, B'; C$  are given.

4. Given five points of a conic, show how to draw the tangent at one of them, making use of the ruler only.

Show how to construct a conic by points having given three points on the curve and the tangents at two of them.

5. State and prove Desargue's theorem relating to a quadrangle inscribed in a conic.

If a variable quadrangle move in such a way as to remain always inscribed in a given conic, while three of its sides turn each round one of three fixed collinear points, show that the fourth side will turn round a fourth fixed point collinear with the three given ones.

6. Given the *centre* and *axis* of homology and two corresponding points (collinear with the centre). Show how a figure *homological* with a given figure may be constructed.

Discuss the case when the axis of homology lies altogether at infinity. Show that the curve homological with a circle is a conic.

7. Explain the principles of *generalization by projection*.

Generalize, by projection, the following :—

(1) Angles in the same segment of a circle are equal.

(2) Confocal conics cut at right angles.

8. Construct a triangle self-conjugate with regard to a given conic.

Prove that if two triangles are both self-conjugate with regard to a given conic, their six vertices lie on a conic and their six sides touch another conic.

9. Prove that the centres of all conics inscribed in the same quadrilateral lie on the straight line which passes through the mid-points of the diagonals of the quadrilateral.

Hence, or otherwise, deduce that the director circles of all conics inscribed in a given quadrilateral form a coaxial system, to which belong the three circles having as diameters the diagonals of the quadrilateral.

10. State Hilbert's five groups of axioms.

With the help of the axioms of congruence, can you prove that all right angles are congruent to one another?

## EIGHTH PAPER

### (MODERN GEOMETRY—SECOND PAPER)

*The questions are of equal value*

*Candidates are required to answer six questions only, of which Question No. 11 is compulsory*

1. If  $A, B, C, D$  are any four points of a row, prove that

$$ABCD \asymp BADC \asymp CDAB \asymp DCBA.$$

If  $ABCD \asymp CBAD$ , show that  $A$  and  $C$  are harmonic conjugates with respect to  $B$  and  $D$ .

2. In a field  $\sigma$ ,  $A, B, C, D$  are four points forming the vertices of a quadrangle.  $A', B', C', D'$  are four points forming the vertices of a quadrangle in a field  $\sigma'$ . Set up the projectivity  $(\sigma) \asymp (\sigma')$  in which  $(A, A'), (B, B'), (C, C'), (D, D')$  are four pairs of corresponding points and show that the projectivity thus set up is unique.

3. Define a *permutation* and prove that for any given base the set of all possible permutations forms a *group*.

Prove that a projectivity connecting two coplanar rows can always be expressed as the resultant of two *involutions*.

4. Given a projectivity  $(a' b' c' \dots) = \tilde{w}(abc \dots)$  connecting two coplanar pencils which are neither concentric nor perspective; show that the points  $aa', bb',$  etc., in which corresponding rays intersect will occupy a certain curve possessing the following properties :—

(a) No line can meet the curve in more than two points.

(b) The vertices of the pencils lie on the curve.

Given any line though  $aa'$ , find its other intersection with the curve.



5. Prove Brianchon's theorem and show that if  $A, B, C$  are three points on a conic and  $a, b, c$  are the tangents thereat, the points  $(BC, a)$ ,  $(CA, b)$ ,  $(AB, c)$  are collinear.

Define a *polar triangle* and prove that if  $PQR$  is a polar triangle with  $P$  inside the conic, the points  $Q$  and  $R$  are both outside.

7. Distinguish between a *regulus* and a *ruled quadric* and show that the section of a ruled quadric by any plane is either a conic or a line-pair.

8. Given two conjugate reguli  $\{abc\dots\}$ ,  $\{a'b'c'\dots\}$  on the same quadric, establish by construction the projectivity  $\{a'b'c'\dots\} = \omega\{abc\dots\}$ . Show that if two complete quadrangles have the same set of diagonal points their eight vertices lie on the same conic.

9. Show that every plane pentagon determines a polarity in which each vertex of the pentagon is the pole of the opposite side.

State Desargues's theorem on involution and apply it to show that either two conics or none can be drawn circumscribing a given quadrangle and touching a given line disjoint to its vertices.

10. By permuting the base points prove that if

$$ABCE = \lambda, BACD = 1 - \lambda \text{ and } CBAD = \frac{1}{\lambda}.$$

If

$$\frac{ax + \beta}{\gamma x + \delta} = \left( \begin{array}{c} \alpha, \beta \\ \gamma, \delta \end{array} \right) (x),$$

prove that

$$\left( \begin{array}{c} \alpha', \beta' \\ \gamma', \delta' \end{array} \right) \left( \begin{array}{c} \alpha, \beta \\ \gamma, \delta \end{array} \right) = \left( \begin{array}{c} \alpha'\alpha + \beta'\gamma, \alpha'\beta + \beta'\delta \\ \gamma'\alpha + \delta'\gamma, \gamma'\beta + \delta'\delta \end{array} \right).$$

11. Explain what is meant by the homogeneous co-ordinates of a point and show that any projectivity of which  $(a_1, a_2)$  is a self-corresponding point may be written in the form

$$l(x_1 a_2 - x_2 a_1)(y_1 a_2 - y_2 a_1) + m y_2(x_1 a_2 - x_2 a_1) + n x_1(y_1 a_2 - y_2 a_1) = 0.$$

Show also that the general equation of a *parabolic* projectivity with its self-corresponding point at  $(a_1, a_2)$  is

$$l(x_1 y_2 - x_2 y_1) + m(x_1 a_2 - x_2 a_1)(y_1 a_2 - y_2 a_1) = 0,$$

where  $lm > 0$ .

12. If  $P$  and  $Q$  are the two points at which the straight line joining two given points  $A$  and  $B$  cuts the circle

$$x^2 + y^2 = r^2,$$

show that the distance between

$$A \text{ and } B = \lim_{r \rightarrow \infty} \frac{r}{2} \log Px(ABPQ)$$

numerically.

## SEVENTH PAPER

## (NON-EUCLIDEAN GEOMETRY—FIRST PAPER)

*The questions are of equal value*

*Candidates are required to answer six questions only, one of which must be Question No. 4*

1. Enunciate Euclid's parallel postulate, and show if it follows from Bolyai's assumption that three points are either collinear or concyclic.

Examine the fallacy in the following proof of Euclid's postulate :—

One altitude  $AD$  of an equilateral triangle  $ABC$  divides it into two right-angled triangles, in which one acute angle is double the other. If the three altitudes meet in  $O$ , each of the triangles  $AOE$ , etc., has one angle equal to half the angle of the equilateral triangle; hence the angle  $OAE = \frac{1}{2}AOE$ . Hence the sum of the angles of the triangle  $ABC$  is equal to half the sum of the angles at  $O$ , i.e., equal to two right angles.

2. Prove that the geometry of the horocycles on the horosphere is the same as the geometry of straight lines on the Euclidean plane.

Hence, or otherwise, shew that the sum of the angles of a geodesic triangle on the horosphere is equal to two right angles.

If  $a$  is the chord of an arc  $\alpha$  of a horocycle, prove that

$$a = 2k \sinh \frac{1}{2}\alpha/k.$$

3. Define paratactic lines and show how you can construct a common perpendicular to two skew lines in Elliptic geometry.

Can you carry out this construction in hyperbolic and Euclidean geometries?

Prove that two paratactic lines cut the same two generators, of the same system, of the absolute.

4. Using Weierstrass' point-co-ordinates, deduce the equation of the absolute in the form

$$x^2 + y^2 - k^2 z^2 = 0.$$

Hence show that in hyperbolic geometry the absolute is a real curve, while in elliptic geometry it is an imaginary conic.

If the distance between the points  $(x_1, y_1, z_1)$  and  $(x_2, y_2, z_2)$  vanishes, prove that their join touches the absolute.

5. (a) Prove the following proposition :—

'Every straight line  $a$ , which lies in a plane  $\alpha$ , divides the remaining points of this plane into two regions having the following properties: Every point  $A$  of the one region determines with each point  $B$  of the other region a segment  $AB$  containing a point of the straight line  $a$ . On the other hand any two points  $A, A'$  of the same region determine a segment  $AA'$  containing no point of  $a$ .'

(b) State the axiom of Archimedes and explain how Lambert has used it to demolish the theory of the obtuse angle.

6. State the axioms of congruence as given by Hilbert and with their help bisect a given angle by means of a construction independent of the principle of continuity.

7. Prove that if two straight lines neither intersect nor are parallel, they must have a common perpendicular.

8. (a)  $ABC$  is a triangle right-angled at  $C$ ; and the distances corresponding to the angles of parallelism  $A$  and  $B$  are denoted by  $l$  and  $m$ . Prove that

$$B + \Pi(c+l) = \Pi(a).$$

$$\Pi(l-b) + \Pi(m+a) + \frac{\Pi}{2}.$$

(b)  $PQRS$  is a quadrilateral in which the angles  $P, Q, R$  are right angles and the angle at  $S$  is  $\beta$ . If  $PQ=a$ ,  $QR=m$ ,  $RS=c$ , and  $SP=l$ , prove that

$$\Pi(l) + \Pi(c+m) + \beta.$$

$$\Pi(l)\beta = \Pi + (c-m).$$

9. Enumerate the cases in which two points in a hyperbolic plane do or do not fix a straight line and give actual construction for drawing the line  $\Omega\Omega'$  where  $\Omega$  and  $\Omega'$  are two distinct points at infinity.

10. If  $ABDC$  is a figure bounded by two concentric Limiting Curves  $AC$  and  $BD$ , and two straight lines  $AB$  and  $CD$ , the straight lines being the axes of the curves, prove that the lengths  $S$  and  $S_x$  of the arcs  $AC$  and  $BD$  are connected by the equation

$$S_x = Se^{-x}$$

where the segments  $AB$  and  $CD$  are  $x$ -units of length and  $AC$  is the external curve and  $BD$  the internal.

11. Prove that :—

(a) in a right-angled triangle right-angled at  $c$

$$\sinh c = \sinh a \cosh l;$$

(b) in any oblique-angled triangle

$$\sinh c : \sinh b : \sinh a = \operatorname{sech} l : \operatorname{sech} m : \operatorname{sech} n.$$

12. Prove that the element of area in Limiting Curve co-ordinates is

$$e^{-\frac{\xi}{k}} d\xi d\eta,$$

and show that in the hyperbolic plane there is a maximum limit to the area of a triangle. What is this limit?

## EIGHTH PAPER

### (NON-EUCLIDEAN GEOMETRY—SECOND PAPER)

*The questions are of equal value*

*ANY SIX questions carry full marks*

1. Show that in a Euclidean space of four dimensions (a) two planes of general position intersect in a point, (b) three lines of general position are intersected by only one straight line. Note the exceptional cases.

2. Show that the projections of three collinear points  $P, Q, R$  on a given plane are themselves collinear. Under what circumstances can the projections coincide?

Show that if two lines are given, we can pass through either plane upon which it will be the projection of the other.

3. What do you understand by the *plane angle* of a hyperplane angle, at a given point of its face? Prove that the plane angle of a hyperplane angle is the *same* at all points of its face.

When a plane intersects a hyperplane but does not lie in it nor is perpendicular to it, show that that plane of the hyperplane, which passes through the intersection and is perpendicular to the projection of the given plane on the hyperplane, is also perpendicular to the given plane.

4. Given any two planes intersecting in a point. Show that there are in general only two planes which are perpendicular to both the planes. Under what circumstances can there be more than two common perpendicular planes?

The angles between two planes are  $\frac{\pi}{4}$  and  $\frac{\pi}{3}$ . Show that a circle on one of these planes projects on to the other plane in an ellipse of eccentricity  $\frac{1}{\sqrt{2}}$ .

5. Obtain the analytical condition satisfied by the Plückerian co-ordinates of two planes through the origin which intersect in a line.

Show that the two planes

$$x_1 + x_2 + x_3 = 0 = x_4$$

$$x_1 + x_2 = 0 = x_3 + x_4$$

intersect in a line.

6. Explain the *two* senses in which a plane can be isocline to a given plane.

Show that through a half line, not in a given plane nor perpendicular to it, two planes can be passed isocline to the given plane.

If a line makes an angle  $\frac{\pi}{4}$  with a given plane, show that the two isoclines to the plane through the given line are perpendicular to one another.

7. Show how it becomes possible for a point to rotate about a plane in a space of four dimensions, while the same is impossible in the ordinary space.

The point  $P(x_1, x_2, x_3, x_4)$  is rotated through a right angle about the  $x_3x_4$  plane. Determine the co-ordinates of the point in its new position.

8. Calculate the hypervolume of the hypersphere defined by the equation

$$x_1^2 + x_2^2 + x_3^2 + x_4^2 = a^2.$$

If the hyperplane  $x_1 = k$  divides the hypersphere into two portions whose hypervolumes are in the ratio 2 : 1, prove that

$$\left( \pi - 6 \sin^{-1} \frac{k}{a} \right) : 2k \sqrt{a^2 - k^2} (5a^2 - 2k^2).$$

9. Distinguish between two 'parallel' and two 'half-parallel' planes in a Euclidean space of four dimensions.

If a plane distinct from each of two parallel planes intersects one in a line and does not intersect the other in a line, show that it will be half-parallel to the second.

10. Define a great circle on a hypersphere.

$PQ$  and  $RS$  are two great circles on a hypersphere. If  $\theta$  be the length of the arc of a great circle joining a point on  $PQ$  to a point on  $RS$ , show that the extreme values of  $\theta$  are determined by the equation

$$\begin{array}{ccccccc} \cos \theta & \cos \theta & (PR) & (PS) & & & \\ (PQ) \cos \theta & \cos \theta & (QR) & (QS) & & & \\ (PR) & (QR) & \cos \theta & (RS) \cos \theta & & & \\ (PS) & (QS) & (RS) \cos \theta & \cos \theta & & & \end{array} \quad | = 0$$

where  $(PQ)$  stands for the cosine of the angle subtended by the arc  $PQ$  at the centre of the hypersphere.

Hence deduce that

$$\cos \theta_1 \cdot \cos \theta_2 = \pm \frac{(PR)(QS) - (QR)(PS)}{\sin \widehat{PQ} \sin \widehat{RS}}$$

where  $\theta_1$  and  $\theta_2$  are the minimum distances between the two great circles.

## SEVENTH PAPER

### (THEORY OF FUNCTIONS OF A COMPLEX VARIABLE—FIRST PAPER)

*The questions are of equal value*

N.B.—You are required to attempt the FOURTH and SEVENTH questions; full marks may be obtained by answering these TWO and ANY FOUR of the remaining questions.

1. (a) Prove that

$$z + \sqrt{z^2 - c^2} + \left| z - \sqrt{z^2 - c^2} \right| = |z + c| + |z - c|$$

(b) If  $x_1, z_1, z_2$  be the vertices of an isosceles triangle, right-angled at the vertex  $z_1$ , prove that

$$z_1^2 + 2z_2^2 + z_3^2 = 2z_2(z_1 + z_3).$$

2. Explain what is meant by *conformal transformation*, and prove that to every such transformation of a plane on a plane, there corresponds an analytic function.

Show that the transformation  $(w+1)^2 z = 4$  transforms the unit-circle in the  $w$ -plane into a parabola in the  $z$ -plane. Find also the region into which the interior of the above circle is transformed.

3. Classify the singularities of an analytic function. Compare the behaviour of a function in the neighbourhood of a pole with the behaviour in the neighbourhood of an *isolated essential* singularity, and prove your statements.

Find the singularities of the function

$$e^{1/z-1} / \left\{ e^{1/z} - 1 \right\},$$

and discuss their nature.

4. Explain how the theory of residues can be applied to the evaluation of certain definite integrals.

Prove by contour integration

$$(i) \int_0^{\infty} \frac{x^{p-1}}{1+x} dx = \pi / \sin p\pi \quad (0 < p < 1),$$

$$(ii) \int \frac{\sin x^2}{x} dx = \pi/4.$$

5. Taking the contour to be a rectangle, give a careful proof of Cauchy's theorem based on the Cauchy-Riemann partial differential equations.

Compare your proof with one of the two proofs given by Goursat.

6. Prove rigorously that an algebraic equation of degree  $m$  has  $m$  roots.

If, at all the points of a contour  $C$ , the inequality

$$|a_k z^k| > |a_0 + a_1 z + a_2 z^2 + \dots + a_{k-1} z^{k-1} + a_{k+1} z^{k+1} + \dots + a_m z^m|$$

be satisfied, prove that the contour contains  $k$  roots of the equation

$$a_m z^m + a_{m-1} z^{m-1} + \dots + a_2 z^2 + a_1 z + a_0 = 0.$$

7. Define carefully *analytic continuation* and illustrate your definition by considering the function given by the series

$$1 + z + z^2 + \dots + z^n + \dots \text{to infinity.}$$

Prove that the function given by the series

$$\sum_{n=0}^{\infty} z^{2^n}$$

cannot be continued beyond its circle of convergence.

8. Prove carefully the following theorem of Mittag-Leffler and state (without proof) any generalization of it :

Let  $\beta_1, \beta_2, \dots, \beta_n, \dots$  form an enumerable aggregate which has no limiting point at any finite distance from the origin and let  $r_n \left( \frac{1}{z - \beta_n} \right)$  be a rational function corresponding to  $\beta_n$  so that

$$\left( \frac{1}{z - \beta_n} \right) = \frac{B_n^{\gamma_n}}{(z - \beta_n)^{\gamma_n}} + \dots + \frac{B_2^{\gamma_2}}{(z - \beta_n)^2} + \frac{B_1^{\gamma_1}}{z - \beta_n}$$

the  $B$ 's being constants and  $\gamma$ 's positive integers; then the totality of the functions  $f(z)$  which are each analytic everywhere in the finite part of the plane, excluding the points  $B$ 's, and have each a pole in  $\beta_n$  with the principal part  $r_n$

$\left( \frac{1}{z - \beta_n} \right)$ , is given by

$$f(z) = G(z) + \sum_{n=1}^{\infty} \left\{ r_n \left( \frac{1}{z - \beta_n} - G_n(z) \right) \right\},$$

where  $G$  is an integral function and

$$G_n(z) = a_0^{(\gamma)} + a_1^{(\gamma)} z + \dots + a_{\gamma_n}^{(\gamma)} z^{\gamma_n},$$

the  $a$ 's being suitably chosen constants.

9. Prove that if, in the case of the series  $\sum_{n=0}^{\infty} a_n z^n$  for which the sum is  $f(z)$ ,

$$\lim_{n \rightarrow \infty} \frac{a_n}{a_{n+1}} z_0$$

exists, then  $z_0$  is a singular point of  $f(z)$ .

Prove by an example that we cannot say that  $z_0$  is the *only* singular point of  $f(z)$ .

10. State without proof the following theorems about integral functions :  
(1) Weierstrass's factor theorem ; (2) Picard's little theorem.

Expand  $\cos z$  as an infinite product.

## EIGHTH PAPER

### (THEORY OF FUNCTIONS OF A COMPLEX VARIABLE—SECOND PAPER)

*The questions are of equal value*

*Answer ANY SIX questions*

1. Explain what you understand by the Riemann surface corresponding to an algebraic function, and how it throws light on the nature of the function.

Examine fully the Riemann surface associated with the equation

$$w^2 + z(w+1) = c,$$

$c$  being a parameter. Discuss carefully what happens when  $c \rightarrow 1$ .

2. Obtain the necessary and sufficient conditions for the conformal representation of one surface on another. Can a suitable transformation always be determined?

The surface  $x = u \cos v$ ,  $y = u \sin v$ ,  $z = uv$  is conformally represented on the ( $X, Y$ ) plane by means of two relations, one of which is  $X = \log u(1+v^2)^{\frac{1}{2}}$ . Find the other, and show that the magnification is inversely proportional to the distance of  $(x, y, z)$  from the origin.

3. Prove that the co-ordinates of any point on a curve of deficiency unity can be expressed as elliptic functions of a suitably chosen parameter.

Show that the curve  $y^2 = (x^2 - 1)^2$  is reduced to a cubic by the birational transformation

$$x = \frac{\eta(1-\xi)}{\eta^2 - \xi}, \quad y = \frac{\eta^2 - \xi^2}{\eta^2 - \xi},$$

and deduce that  $x$  and  $y$  are expressed in terms of elliptic functions by means of

$$\xi = -1 + 4^{\frac{1}{2}} \mathfrak{E}(u), \quad \eta = \frac{\mathfrak{E}'(u)}{1 + 4^{\frac{1}{2}}} \quad (g_2 = 0, g_3 = -1)$$

4. Write a brief essay on Abelian integrals and their classification, and state Abel's theorem.

What conclusions can you draw from the application of Abel's theorem to integrals associated with the quartic curve

$$y^2 = (1-x^2)(1-k^2 x^2) ?$$

5. Outline the process by which an elliptic integral is reduced to dependence upon the normal forms.

Express

$$\int_0^x \frac{dx}{\sqrt{(2x-x^2)(4x^2+9)}}$$

in terms of a complete elliptic integral of the first kind with a real modulus.

6. Obtain the differential equation of the quarter periods of the Jacobian elliptic functions and deduce that these quantities satisfy Legendre's equation for functions of degree  $-\frac{1}{2}$  and argument  $1-2k^2$ . Show also that the differential equation can be put in the form

$$\frac{d}{dk} \left( kk' \frac{du}{dk} \right) = ku,$$

where  $k$  is the modulus.

7. Show that any elliptic function can be expressed linearly in terms of  $\zeta$  functions and their derivatives.

Express in this form

$$\zeta'(u)\zeta''(u) - \{\zeta'(u)\}^2.$$

8. Prove that

$$(a) \quad \zeta' \left( \frac{w_1}{2} \right) = -2\{e_1 - e_2\}(e_2 - e_3)^{\frac{1}{2}} \{(e_1 - e_2)^{\frac{1}{2}} + (e_1 - e_3)^{\frac{1}{2}}\},$$

$$(b) \quad \zeta''(u) = 6 \frac{\sigma(u+a) \cdot \sigma(u-a) \cdot \sigma(u+c) \cdot \sigma(u-c)}{\sigma^4(u) \cdot \sigma^2(a) \cdot \sigma^2(c)},$$

where

$$\zeta(a) = -\zeta(c) = \left( \frac{1}{12}g \right)^{\frac{1}{2}}$$

9. Obtain the addition theorem for the function  $sn u$ , and show that

$$1 - k^2 sn^2(u+v) \cdot sn^2(u-v) = \frac{(1 - k^2 sn^2 u)(1 - k^2 sn^2 v)}{(1 - k^2 sn^2 u \cdot sn^2 v)^2}.$$

10. (a) Find the necessary and sufficient condition that the six points  $x = \zeta(w)$ ,  $y = \zeta'(w)$ , whose arguments are

$$w_1, w_2, \dots, w_6$$

shall lie on a conic.

(b) If the tangents drawn from a point  $P$  on the cubic  $x = \zeta(w)$ ,  $y = \zeta'(w)$  meet the curve in  $A, B, C, D$ , show that the pairs of lines  $AB, CD$ ;  $AC, BD$ ; and  $AD, BC$ ; intersect at points  $Q, R, S$  on the curve. Show also that the tangents at  $P, Q, R, S$  intersect at a point on the curve.



## SEVENTH PAPER

## (THEORY OF NUMBERS—FIRST PAPER)

*The questions are of equal value**Answer ANY SIX questions*

1. Explain what you mean by the system of (i) *least positive residues*, (ii) *absolutely least residues* with respect to a given modulus. When do the least positive and the absolutely least residues with respect to the same modulus of an integer, which may be either positive or negative, coincide and when do they differ? Shew that the least positive residues (mod  $m$ ) of the numbers  $a+nb$  ( $n=0, 1, \dots, m-1$ ) form the system of least positive residues of  $m$ , provided  $b$  is prime to  $m$ .

Calculate least positive residue (mod 19) of  $11^{777}$ .

2. Prove that a congruence of the  $n$ th degree whose modulus is prime cannot have more than  $n$  roots.

If  $f(x) \equiv 0 \pmod{p}$  possesses as many roots as its degree indicates, the same is true also of the congruences

$$\phi(x) \equiv \psi(x) \equiv 0 \pmod{p} \text{ where } f(x) = \phi(x)\psi(x),$$

$p$  being a prime. Prove this.

Shew that the congruence  $x^d - 1 \equiv 0 \pmod{p}$  possesses  $d$  roots if  $p-1 \equiv 0 \pmod{d}$ ,  $p$  being a prime.

3. If  $m$  and  $n$  are prime to each other, prove that

$$\phi(mn) = \phi(m)\phi(n),$$

where  $\phi(x)$  denotes the number of positive integers less than and prime to  $x$ . How do you modify the formula when  $m$  and  $n$  are not prime to each other?

Prove the following :—

$$\sum \frac{\phi(d)}{d} = \prod_{p=1}^k \left\{ 1 + \frac{\phi(p)-1}{p} \right\},$$

where the summation sign extends over all divisors  $d$  of

$$n = p_1^{\pi_1} p_2^{\pi_2} \dots p_k^{\pi_k},$$

inclusive of 1 and  $n$ .

4. Define the *primitive root* of a number. Enumerate the types of numbers which can possess primitive roots. Shew that a prime  $p$  possesses  $\phi\{\phi(p)\}$  primitive roots, all of which can be obtained from a knowledge of one of them. State the circumstances under which a primitive root of  $p$  is also a primitive root of  $p^\lambda$ .

Determine the primitive root of 23.

5. Solve the following congruences :—

(i)  $12x \equiv 30 \pmod{66}.$

(ii)  $x^2 \equiv 29 \pmod{70}.$

(iii)  $x^2 \equiv -1 \pmod{p}$ ,  $p$  being a prime  $\equiv 1 \pmod{4}.$

6. Write down expressions for—

(i) the sum of the divisors of  $N$ ;

(ii) the number of integers less than  $N$  and prime to it.

The number  $N$  is the product of three unequal prime factors, the sum of whose squares is 4,899. The sum of the divisors of  $N$ , including 1 and  $N$ , is 70,224; and there are 60,480 numbers less than  $N$  and prime to it. Determine  $N$  and its factors.

7. If  $t_n$  denotes the number of divisors of  $n$ , and  $i$  the greatest integer in  $\frac{n}{r}$ , prove that

$$t_1x + t_2x^2 + \dots + t_nx^n = \sum_{r=1}^n x^r \cdot \frac{1-x^r}{1-x^r}$$

and deduce that

$$(i) \quad \sum_1^n t_n x^n = \sum_1^n \frac{x^n}{1-x^n}$$

and  $(ii) \quad \sum_1^n \frac{t_n}{n^k} = \zeta^k(k),$

where  $\zeta(k)$  is Riemann's zeta function.

8. Prove the theorems of Fermat and Wilson.

Show that if  $p$  is an integer, and  $4p \pm 1$  are both primes, the product of these three numbers is a divisor of

$$(4p-1)[(2p-1)]^2 - (4p+1)[(2p-1)]^2 + 8p.$$

9. Define a quadratic residue, and prove that  $a$  is or is not a quadratic residue of the prime  $p$  according as

$$a^{\frac{p-1}{2}} \equiv 1 \text{ or } -1, \text{ mod } p.$$

Examine the nature of the powers of  $a$  with respect to the modulus  $p$ , according as  $a$  is or is not a quadratic residue, and prove your statements.

10. Write a brief essay on the law of quadratic reciprocity, and illustrate by examples the use to which it is put.

11. Prove that

$$\sum \left( \frac{m}{P} \right) = 0,$$

where  $P$  is a non-square positive integer and the summation extends over all positive integers  $m$  less than and prime to  $P$ .

Deduce that

$$\sum \left( \frac{-1}{n} \right) \left( \frac{n}{P} \right) = 0, \text{ where } P \equiv 3 \pmod{4}$$

and the summation extends over all positive integers  $n$  less than and prime to  $4P$ .

Obtain all positive integers  $x$  which make

$$\left( \frac{11}{x} \right) = +1.$$

## EIGHTH PAPER

## (THEORY OF NUMBERS—SECOND PAPER)

The questions are of equal value

Answer SIX questions only

1. Express the conditions of *reduction* both for a *definite* and an *indefinite* binary quadratic form in terms of its roots.

If the form  $(a, b, c)$  is equivalent to  $(a', b', c')$ , then will the *principal* root of one be equal to the *principal* or *subsidiary* root of the other according as the equivalence is proper or improper. Prove this.

Under what circumstances can two forms be both properly and improperly equivalent to each other? Give an example in support of your answer.

2. The two non-ambiguous *reduced* forms  $(a, b, c)$  and  $(a', b', c')$  of the same negative determinant are properly equivalent. Establish the following :—

$$a=c=a'=c', b=-b'.$$

What would be the relation between their coefficients if the given forms are ambiguous?

Obtain the non-equivalent reduced forms for  $D=-35$ .

3. Expand the *absolute* value of the *principal* root of an indefinite reduced form into a simple recurring continued fraction.

Apply your process to the forms  $(-7, 3, 6)$ .

4. If a form of determinant  $D$  can primitively represent  $m$ , shew that  $D$  is a quadratic residue of  $m$ . Verify by an example that the converse is not necessarily true.

Shew that all *primitive* representations deducible from a given representation  $(x, y)$  of  $m$  through the form  $(a, b, c)$  are given by the set

$$\left( \frac{xt - (bx + cy)u}{\sigma}, \frac{yt + (ax + by)u}{\sigma} \right),$$

where  $(t, u)$  is any integral solution of the equation  $t^2 - Du^2$ , and  $\sigma$  the divisor of the form  $(a, b, c)$  of determinant  $D$ .

Indicate the possibility of representations not contained in the above set.

5. State and prove *completely* Fermat's theorem on the resolution of a prime  $p \equiv 1 \pmod{4}$  into the sum of two squares.

Obtain the *different* resolutions of 65 into the sum of two squares.

6. Prove that the duplication of a pro-primitive class produces a class in the *principal genus*. State the converse theorem and verify its truth by taking two classes from the principal genus for  $D=24$ .

Exhibit the different genera for  $D=24$ .

7. Explain what you mean by a *group* of pro-primitive classes. What is the largest group for a given determinant? Prove that the *period* of any class is contained in the group.

Prove that every pro-primitive genus contains the same number of classes.

8. Prove that the *compound* of any number of classes is independent of the order in which the classes are compounded one after another.

If  $k, k', k''$  denote three pro-primitive classes such that  $kk'k''=1$ , discuss the nature of the classes.

9. Prove that

$$\phi(h, p) = \left( \frac{h}{p} \right); \left( \frac{p-1}{2} \right)^2 \sqrt{p},$$

where

$$\phi(h, p) = \sum_{i=1}^{p-1} e^{\frac{2h a^2 \pi i}{p}},$$

$p$  being an odd positive prime.

Employ this result to prove the Law of Quadratic Resiprocity in its entirety.

10. What is a cyclotomic equation? If  $\tau$  denotes a root of such an equation of degree  $p-1=ef$ , where  $p$  is an odd positive prime and  $g$  a primitive root of  $p$ , then every rational function of  $\tau$  which remains unaltered when  $\tau$  is changed into  $\tau^g$  is a linear function of Gauss's  $f$ -nomial periods. Prove this.

If  $A = \sum r^a$ ,  $B = \sum r^\beta$ , where the summations extend over all positive quadratic residues  $a$  and all non-residues  $\beta$  less than  $p$ , then will

$$AB = \frac{1}{4} \left\{ 1 - \left( \frac{-1}{p} \right) p \right\}.$$

11. If  $h$  denotes the number of pro-primitive classes for a given negative determinant  $D = -P \equiv 1 \pmod{4}$ , and  $D$  does not contain a square factor, then will

$$h = \sum_{a=1}^{\frac{1}{2}(P-1)} \left( \frac{a}{P} \right).$$

where  $\frac{a}{P} = 0$ , when  $a$  is not prime to  $P$ .

Work out the case for  $D = -19$ .

## SEVENTH PAPER

### (THEORY OF GROUPS—FIRST PAPER)

N.B.—You are required to attempt the SIXTH and ELEVENTH questions; full marks may be obtained by answering these TWO and ANY FOUR of the remaining questions.

1. Define a permutation and show that every abstract group of order  $n$  is simply isomorphic with a regular permutation group of degree and order  $n$ .

Prove that the only substitutions on  $n$  letters which are commutative with a cyclic substitution on those letters are the powers of this cyclic substitution.

2. Define a group and a semi-group. Show that if the elements  $a, b, c, \dots$  form a group, so do

$$g^{-1}ag, g^{-1}bg, g^{-1}cg, \dots$$

If  $g_1, g_2, g_3, \dots$  are the elements of a group, so are

$$g_1 g_2, g_2 g_3, g_3 g_4, \dots$$

and so are

$$g_1 g_2, g_2 g_3, g_3 g_4, \dots$$

Prove also that the permutations

$$\begin{pmatrix} g_1 & g_2 & g_3 & \dots \\ g_1 g_2 & g_2 g_3 & g_3 g_4 & \dots \end{pmatrix} \text{ and } \begin{pmatrix} g_1 & g_2 & g_3 & \dots \\ g_1 g_2 & g_2 g_3 & g_3 g_4 & \dots \end{pmatrix}$$

are both regular and permutable.

3. Show that all the characteristic roots of a real symmetric substitution are real.

State the general theorem of which this is a particular case and hence prove that three real paraboloids can always be drawn through the curve of intersection of an ellipsoid  $S$  with a conicoid  $S'$ .

4. Define the pole of a substitution and show that the unitary substitution

$$\left. \begin{aligned} x' &= (i \cos^2 \phi - \sin^2 \phi)x + (1+i) \sin \phi \cos \phi \cdot y, \\ y' &= (1+i) \sin \phi \cos \phi \cdot x + (i \sin^2 \phi - \cos^2 \phi)y, \end{aligned} \right\} (A)$$

has a pole  $(\sin \phi, -\cos \phi)$  corresponding to the characteristic root  $-1$ . Show also that the substitution

$$\begin{aligned} x' &= \sin \phi \cdot x - \cos \phi \cdot y, \\ y' &= -\cos \phi \cdot x - \sin \phi \cdot y \end{aligned}$$

is self-inverse and it transforms the substitution (A) into a multiplication.

5. Explain the distinction between an absolute invariant and a relative invariant.

Show that every finite group has invariants.

Prove that an expression is an invariant of  $G$  if it is not altered when we perform on it every one of a set of substitutions which generate  $G$ . Hence show that

$$\overline{xx} + \overline{yy}$$

is an invariant of the group generated by

$$(\sin \theta \cdot x - \cos \theta \cdot y; \cos \theta \cdot x + \sin \theta \cdot y)$$

and that

$$xy(x^2 - y^2)$$

is a relative invariant of the group generated by

$$(i) (ix, -iy) \text{ and } (ii) \left( \frac{1-i}{2} x + \frac{1-i}{2} y, \frac{-1-i}{2} x + \frac{1+i}{2} y \right).$$

6. Prove that every Abelian group of finite order is a direct product of cyclical groups.

Assuming that the irreducible representations of such a group are all the first degree, show that the number of distinct irreducible representations is equal to the order of the group.

7. Prove that every group (of finite order) of linear substitutions can as the result of a change of variables be transformed into a group whose matrices are all unitary. Define the terms *reducible* and *completely reducible* as applied to such a group.

8. If  $G$  is a group of order  $p^m$  where  $p$  is a prime which does not divide  $m$ , prove the theorem of Sylow that  $G$  contains at least one subgroup of order  $p^a$ .

Establish further *any two* of the following :—

- (i) the total number of subgroups of order  $p^a$  in  $G$  is  $\equiv 1 \pmod{p}$ ;
- (ii) any two of these subgroups are conjugate in  $G$ ;
- (iii) any subgroup of order  $p^a$  is contained in one or more of the subgroups of order  $p^a$ .

9. What is meant by the characteristic of an operation of a group? Shew that in general the characteristics of inverse operations are conjugate complex quantities; and that for the symmetric group the characteristic is necessarily real and integral or else zero.

10. Prove that every translation-group containing no infinitesimal translation is generated by not more than three independent translations.

Deduce that no function of the complex quantity

$$x + \sqrt{-1} y$$

can have more than two independent periods.

11. (a) Identify the following four important group :—

- (i)  $a^{4m} = b^2 = 1, bab = a^{1+2m}$ ;
- (ii)  $a^{4m} = b^2 = 1, a^{2m} = (ab)^2$ ;
- (iii)  $a^m = b^2 = (ab)^2 = 1$ ;
- (iv)  $a^{2m} = 1, a^m = (ab)^2 = b^2$ .

(b) Prove that a metacyclic group contains a dihedral subgroup.

## EIGHTH PAPER

### (THEORY OF GROUPS—SECOND PAPER)

N.B.—You are required to attempt the SECOND and NINTH questions; full marks may be obtained by answering these TWO and ANY FOUR of the remaining questions.

1. (a) Obtain the conjugate values of  $x_1, x_2, x_3, x_4$  under the symmetric group  $G_{2,4}$  on 4 letters, and determine the groups to which the different conjugate values, including the original function, belong.

(b) Find the resolvent equation for  $x_1, x_2, x_3, x_4$ .

2. (a) Show that if a rational function  $\phi(x_1, x_2, \dots, x_n)$  remains unaltered by all the permutations which leave another rational function  $\psi(x_1, x_2, \dots, x_n)$  unaltered, then  $\phi$  is a rational function of  $\psi$  and the elementary symmetric functions of the arguments.

(b) If  $\phi$  belongs to  $G$ , and  $\psi$  belongs to  $H$ , a sub-group of index  $\mu$  under  $G$ , then prove that  $\psi$  satisfies an equation of degree  $\mu$  whose coefficients are rational functions of  $\phi$  and the elementary symmetric functions of the arguments.

(c) Show that the question of the algebraic solubility of equations is based on these two fundamental propositions.

3. (a) Define the terms *domain*, *algebraic domain*, *primitive domain*, *normal domain* as used in the theory of groups.

(b) Prove that the algebraic domain  $\Omega(x_1)$  consists of all integral functions of  $x_1$  which are rational in  $\Omega(1)$ .

4. (a) Prove that every rational function

$$\phi(x_1, x_2, \dots, x_n)$$

of the roots of an equation, which remains unaltered by all the permutations of the group of the equation, lies in the domain of rationality  $R$ .

(b) Prove also that every rational function

$$\phi(x_1, x_2, \dots, x_n)$$

of the roots which equals a quantity in  $R$ , remains unaltered by all the permutations of the group.

(c) Prove that any group satisfying both these properties for a domain  $R$ , is the group of the equation for that domain.

5. (a) When is an equation said to be *affected* in a domain?

(b) Prove that the group of the general equation for the domain  $R$  defined by its coefficients and any chosen constants is the symmetric group. Hence, or otherwise, show that the general equation is *unaffected* in that domain.

6. Write an *historical* essay on the problem of the geometrical construction of regular polygons of  $n$  sides, given details specially for the cases of  $n=17$ ,  $n=257$ .

7. (a) Define the *metacyclic group* of degree  $p$ . Show that the  $p(p-1)$  permutations satisfying the defined condition form a group.

(b) Define a *metacyclic equation*. Show that it is irreducible and that all its roots are rational functions of two of the roots with coefficients in  $R$ .

8. (a) When is it possible to construct a regular polygon of  $n$  sides? Give a complete demonstration.

(b) Can you construct regular polygons of 25, 65, and 85 sides?

9. What is meant by the Galois resolvent of an equation? Illustrate your answer by considering the equation

$$x^3 - x^2 + x - 1 = 0.$$

10. Prove carefully that there are exactly 3, 7, 15 or 27 real straight lines on a general real cubic surface.

11. What is the 'form problem' for the icosahedral group? Indicate *briefly* how you will prove *any one* of the following properties of the icosahedral

equation  $\frac{H^2}{1728J^2} = Z :-$

(i) all its roots are linear fractional function of a single root;

(ii) the roots of any quintic equation can be expressed in terms of radicals and a root of the above equation.

## SEVENTH PAPER

## (VECTOR ANALYSIS AND QUATERNIONS—FIRST PAPER)

*The questions are of equal value*

*Answer ANY SIX questions*

1. Discuss the character of the transformation  $\rho' = q\rho q^{-1}$  and show that if  $Sq$  is not zero, the relations  $\alpha' = qa q^{-1}$  and  $V. q\alpha = V. \alpha'q$  are equivalent.

If three vectors  $\alpha', \beta', \gamma'$  are derived by a conical rotation from three others  $\alpha, \beta$ , and  $\gamma$ , prove that it is possible to determine scalars  $x, y$ , and  $z$ , so that

$$x(\alpha' - \alpha) + y(\beta' - \beta) + z(\gamma' - \gamma) = 0.$$

2. Show that any quaternion can be expressed as a power of a vector.

Prove that

$$d\alpha^x = dx \left( \log Ta + \frac{\pi}{2} Ua \right) \alpha^x,$$

where  $\alpha$  is a constant vector and  $x$  a variable scalar; and that

$$d\alpha^x = xS \frac{da}{\alpha} \cdot \alpha^x + V \frac{da}{\alpha} \cdot V\alpha^x,$$

where  $x$  is constant and  $\alpha$  variable.

3. Obtain the equation of the radical axis of the three spheres whose equations are

$$\rho^2 - 2Sap + l = 0,$$

$$\rho^2 - 2S\beta\rho + m = 0,$$

$$\text{and } \rho^2 - 2S\gamma\rho + n = 0,$$

and show how these equations may be simplified by a suitable choice of origin.

Find the locus of the centre of a sphere cutting three spheres orthogonally.

4. Show that a linear vector function can be uniquely determined if the results of its operation on three non-coplanar vectors are given.

Construct the function which makes

$$\phi\gamma_1 = g_1\gamma_1, \phi\gamma_2 = g_2\gamma_2, \phi\gamma_3 = g_3\gamma_3,$$

where  $g_1, g_2$ , and  $g_3$  are three unequal scalars, and show that its spin vector is given by

$$2S\gamma_1\gamma_2\gamma_3 = (g_1 - g_2)\gamma_1 S\gamma_2\gamma_3 + (g_2 - g_1)\gamma_2 S\gamma_3\gamma_1 + (g_1 - g_3)\gamma_3 S\gamma_1\gamma_2.$$

5. Define the differential operator  $\nabla$  and obtain its expression in orthogonal curvilinear co-ordinates  $u, v, w$  in the form

$$\nabla = -\rho_1^{-1} \frac{\partial}{\partial u} - \rho_2^{-1} \frac{\partial}{\partial v} - \rho_3^{-1} \frac{\partial}{\partial w},$$

where

$$\rho_1 = \frac{\partial \rho}{\partial u}, \rho_2 = \frac{\partial \rho}{\partial v}, \rho_3 = \frac{\partial \rho}{\partial w}.$$

Determine the expression for  $\Delta^2$  when

$$\rho = u[(i \cos w + j \sin w) \sin v + k \cos w].$$



6. Prove that

$$(i) \, dq^{\frac{1}{2}} = \frac{Kq^{\frac{1}{2}}, dq \cdot q^{-\frac{1}{2}} + dq}{4Sq^{\frac{1}{2}}}$$

$$(ii) \, \nabla \cdot pq = \nabla p \cdot q_0 + \nabla \cdot p_0 \cdot q,$$

where the suffix intended to denote that the affected symbols are not to be operated on by  $\nabla$ .

7. Establish the following :—

(i) The axes of a self-conjugate function are mutually rectangular.

(ii) The latent roots of a real self-conjugate function are real.

(iii) The spin vectors of co-axial functions lie in a fixed plane.

8. Show that the locus of the mean point of a triangle formed by the extremities of mutually conjugate radii as conterminous sides is  $Sppp+8=0$ .

9. (a) Find the rate of rotation of the osculating plane as we pass along a curve.

(b) Find the vector twist for the helix

$$s = a(i \cos t + j \sin t) + kbt.$$

10. (a) If a parallelogram be inscribed in an ellipse, show that its sides are parallel to conjugate diameters.

(b) Of a system of three rectangular vectors two are confined to given planes; find the surface traced out by the third

11. Given that a family of surfaces  $u = \text{const.}$  is an equipotential system, show that the potential corresponding to  $u$  is

$$P = \int du \cdot e^{-\int \frac{\nabla^2 u}{(\nabla u)^2} du}$$

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## EIGHTH PAPER

### (VECTOR ANALYSIS AND QUATERNIONS—SECOND PAPER)

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*The questions are of equal value*

*Answer ANY SIX questions*

1. (i) Denoting, as usual, the base of the Napierian logarithm by the symbol  $e$ , define  $e^A$  in terms of a given quaternion  $q$ , and work out the following relations :—

$$e^{Aa} = e^{\frac{2A}{\pi}} = \cos A + a \sin A$$

(where  $a$  is a unit vector and  $A$  is a scalar).

(ii) If  $\alpha, \beta, \gamma$  be three perpendicular unit vectors (satisfying of course, the identities  $\alpha = \beta\gamma, \beta = \gamma\alpha, \gamma = \alpha\beta$ ), prove that the three quaternions

$$\beta^{\frac{1}{2}}\gamma^{\frac{1}{2}}, \gamma^{\frac{1}{2}}\alpha^{\frac{1}{2}}, \alpha^{\frac{1}{2}}\beta^{\frac{1}{2}}$$

are co-axial, the common axis being  $\alpha + \beta + \gamma$ .

Do the quantities

$$e^{\beta^{\frac{1}{2}}\gamma^{\frac{1}{2}}}, e^{\gamma^{\frac{1}{2}}\alpha^{\frac{1}{2}}}, \text{ and } e^{\alpha^{\frac{1}{2}}\beta^{\frac{1}{2}}}$$

also represent co-axial quaternions? If so, determine their common axis.

2. (i) If the (scalar) roots and (vector) axes of a linear vector function  $\phi\rho$  be  $(g_1, g_2, g_3)$  and  $(\gamma_1, \gamma_2, \gamma_3)$ , prove that the corresponding quantities for the conjugate function  $\phi'\rho$  are

$$(g_1, g_2, g_3) \text{ and } (UV_{\gamma_2\gamma_3}, UV_{\gamma_3\gamma_1}, UV_{\gamma_1\gamma_2})_i$$

and that those attached to the reciprocal function  $\phi^{-1}\rho$  are

$$(g_1^{-1}, g_2^{-1}, g_3^{-1}) \text{ and } (\gamma_1, \gamma_2, \gamma_3).$$

(ii) Prove that, if

$$\phi \equiv \phi_1 \phi_2 \phi_3 \dots \phi_{n-2} \phi_{n-1} \phi_n,$$

where the constituent factors on the right are linear operators), then

$$\phi' = \phi'_n \phi'_{n-1} \phi'_{n-2} \dots \phi'_2 \phi'_1,$$

$$\text{and } \phi^{-1} = \phi_n^{-1} \phi_{n-1}^{-1} \phi_{n-2}^{-1} \dots \phi_2^{-1} \phi_1^{-1}.$$

Deduce or prove directly that, if  $\phi$  be any linear vector function and  $\phi'$  its conjugate the product  $\phi\phi'$  is a self-conjugate function.

3. (i) Investigate the six scalar relations, which must hold if  $(\alpha, \beta, \gamma)$  are to be a triad of conjugate semi-diameters of the quadric

$$S\rho\phi\rho = -1,$$

and prove that, whichever conjugate set be taken, the scalar expression

$$(\phi\alpha)^2 + (\phi\beta)^2 + (\phi\gamma)^2$$

remains invariant.

(ii) Granting that  $(\alpha, \beta, \gamma)$  are a conjugate set for the conicoid

$$S\rho\theta^2\rho = -1,$$

prove that  $\theta\alpha, \theta\beta, \theta\gamma$  make up a triad of orthogonal unit vectors.

[N.B.—The linear functions  $\phi$  and  $\theta$  are both self-conjugate.]

4. (i) A curve being given in the form

$$\rho = \phi(s),$$

(where  $s$  is the arcual parameter), calculate in terms of  $s$  the unit vectors  $\alpha, \beta, \gamma$ , located respectively along the tangent, principal normal and binormal at an arbitrary point ' $s$ .'

(ii) Assuming the vector analogues of Frenet-Serret-formulae, viz.

$$\frac{d\alpha}{ds} = \frac{\beta}{r}, \quad \frac{d\beta}{ds} = \frac{\gamma}{r'} - \frac{\alpha}{r}, \quad \frac{d\gamma}{ds} = -\frac{\beta}{r'}.$$

(where  $r$  and  $r'$  are the scalar radii of curvature and of torsion), establish the mutual equivalence of the four relations :

$$S. \lambda \alpha = \text{const.}, \quad \}$$

$$S. \lambda \beta = 0,$$

$$S. \lambda \gamma = \text{const.}, \quad \} \text{ (where } \lambda \text{ is a vector constant),}$$

$$\text{and } \frac{r}{r'} = \text{const.}, \quad \}$$

and interpret these results geometrically with reference to the helix.

5. (i) For the surface given by the scalar equation

$$f(\rho) = 0,$$

obtain the differential equations of the lines of curvature and of asymptotic lines in the respective forms :

$$S. v d\rho d\tau = 0$$

$$\text{and } S. d\rho dv = 0,$$

where the vector function  $v$  is  $\nabla \cdot f(\rho)$ .

(ii) Calculate the vector  $v$  for the sphere given by the general equation

$$\rho^2 - 2S\lambda\rho + l = 0,$$

and discuss the ultimate form of the first of the two aforementioned differential equations.

Deduce immediately that every curve traced on a sphere behaves like a line of curvature.

6 If three forces are in equilibrium, prove that they must be in the same plane.

If four forces are in equilibrium, prove that their lines of action are generators of a hyperboloid.

7 Deduce the usual  $u$  and  $\theta$  equations for a central orbit by expressing  $\rho$  in the form

$$\frac{2\theta}{\gamma k^2 i}.$$

Obtain expressions for the vector curvatures of a central orbit and its hodegraph. Show that the law of nature is the only law for which the hodegraph is a circle for all initial conditions.

8. A body under no applied forces moves about a fixed point, the equation  $\theta^2 S \omega \phi \omega - h^2 \phi \omega^2 = 0$ ,  $h$  and  $0$  being constants of integration.

Find the locus of points fixed in space about which at any instant the moment of momentum is a minimum.

9. Interpret Hamilton's focal and cyclical transformations of a self-conjugate function

$$\phi\rho = a\alpha V\alpha\rho + b\beta S\beta\rho = g\rho + \lambda S\mu\rho + \mu S\lambda\rho,$$

where  $\phi\rho$  represents the displacement due to a small pure strain.

10. Find the equation of motion for a perfect fluid, and prove that when the forces acting on a perfect fluid are conservative, the circulation in any circuit moving with the fluid remains unchanged, provided the density is a function of the pressure.

11. (a) Show that in the case of a pure strain the function  $\phi$  is self-conjugate with positive latent roots.

(b) Show that the strain produced by two successive pure strains is generally impure.

## MIXED MATHEMATICS

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## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be attempted*

1. Shew how any system of forces can be reduced to a wrench.

Shew that, for a given system of forces, the axis of the equivalent wrench is a unique straight line.

Obtain the condition that the system may reduce to a single resultant (i.e., either a single force or a single couple).

2. Shew how any system of forces can be reduced to two forces along any two arbitrarily given straight lines.

When a system of forces is reduced to a pair of forces represented in magnitudes and lines of action by two straight lines, the volume of the tetrahedron formed by these lines is constant, however the reduction is made.

3. A uniform inextensible string is in limiting equilibrium on a rough surface under given forces. Obtain the equations of equilibrium in as simple forms as possible.

A weightless string lies stretched in one plane across a rough sphere of radius  $a$ ; shew that the distance of the plane from the centre cannot exceed  $a \sin \epsilon$ , where  $\epsilon$  is the angle of friction.

4. Assuming the Bernoulli-Eulerian relation between bending moment and curvature, shew that, if a slightly elastic rod rests with its two ends on two supports at the same level, the deflection at a distance  $x$  from one end is

$$\frac{w}{24k} x (a-x) (a^2 + ax - x^2),$$

where  $k$  is the flexural rigidity,  $a$  the length, and  $wa$  the total weight.

5. Write an essay on the Principle of Virtual Work.

## SECOND HALF

*Attempt THREE questions only*

1. Find by direct integration the potential  $V$  of a uniform rod of length  $l$  and line density  $m$ , at an external point  $P$  in the form

$$V = m \log \frac{r_1 + r_2 + l}{r_1 + r_2 - l},$$

$r_1$  and  $r_2$  being the distances of  $P$  from the extremities of the rod.

A thin uniform rod of *infinite* length and line density  $m$  is placed along the axis of  $x$ . Find the work done in moving a particle of unit mass from the point  $(0, y_1, z_1)$  to the point  $(0, y_2, z_2)$ , the rod extending to infinity on both sides of the origin.

2. Determine the law of force when it is given that the attraction of every thin uniform spherical shell at every external point is the same as that of an equal particle placed at the centre.

A thin spherical shell of radius  $a$  attracts an internal particle  $P$  at a distance  $c$  from the centre. If the shell be divided into two parts by a plane through  $P$  perpendicular to it, show that the resultant attraction of each part at  $P$  is

$$\frac{2\pi\sigma a}{c^2} \left[ a - (a^2 - c^2)^{\frac{1}{2}} \right],$$

where  $\sigma$  is the surface density. (The law of force is the inverse square of the distance.)

3. Show that the potentials of two confocal solid homogeneous ellipsoids at any point external to both are proportional to their masses.

II. If  $M$  be the mass of a spherical portion of a solid homogeneous ellipsoid, prove that the resultant attraction of the whole ellipsoid on it will be the same as if the mass  $M$  were collected at its centre of gravity.

4. Show that the potential  $V$ , at the point  $P$  in a plane region bounded by a closed curve  $C$ , can be put in the form

$$V = -\frac{1}{2\pi} \int_C V \frac{\partial G}{\partial n} ds.$$

$G$  being a function equal to  $-\log r + U$ , where  $r$  is the distance measured from  $P$  and  $U$  is a plane function harmonic within the curve  $C$  which makes  $G$  vanish at the boundary.

Find the function  $G$  when the boundary is a circle of radius  $a$ .

5. There is some reason to suppose that the strata of the earth are elliptical and that the density decreases from the centre to the surface. Assuming then that  $r=a(1+y_z)$  and that  $\rho=ga^m$ , where  $m$  is greater than  $-2$ , prove that the potential at any internal point is

$$4\pi g \left[ \frac{a^{3+m}}{2+m} + \frac{a^{3+m} - a^{3+m}}{3+m} \frac{1}{r'} + \frac{y'_z}{r'^3} \frac{a^{5+m} - a^{5+m}}{5+m} \right],$$

where  $a$  is the value of  $a$  at the boundary, and  $r'=a(1+y'_z)$ .

The surface density at any point of a sphere of radius  $a$  is  $\rho=myz$ . Find its potential at any external point  $(x', y', z')$ .

## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

*THREE questions are to be attempted out of FIVE*

1. A bead moves on a smooth wire in a vertical plane under a resistance  $\{k(\text{velocity})^2\}$ ; find a linear equation to give  $v^2$ , assuming the form of the intrinsic equation to the wire to be  $s=f(\phi)$ .

Find the value of  $v^2$  if  $s=a\phi$ , the intrinsic equation to a circle.

2. If a particle describes a lemniscate  $r^2=a^2\cos 2\theta$  under a force to its pole, shew that the equation to the hodograph is

$$r^2 = a^2 \sec^3 \frac{\pi - 2\theta}{3}.$$

3. Find the equations of motion of a particle referred to rectangular axes which move about the origin  $O$  in an arbitrary manner.

4. A circular wire is constrained to turn round a vertical tangent  $Oz$  with a uniform angular velocity  $w$ . A heavy smooth bead, starting from the highest point  $A$  without any velocity relative to the curve, descends under the action of gravity. Find the velocity and pressure for any position.

5. A smooth helix is placed with its axis vertical and a small bead slides down it under gravity; shew that it makes its first revolution from rest in time

$$2 \sqrt{\frac{\pi a}{g \sin \alpha \cos \alpha}},$$

where  $\alpha$  is the angle of the helix.

### SECOND HALF

*Attempt THREE questions only*

1. If a plane area wholly immersed, rotate about its mean centre in its own plane, show that the locus of the centre of pressure relative to the area is an ellipse.

Find the locus of the centre of pressure relative to the area of any shape when it rotates in its own plane about a fixed point in the surface of the liquid, the point being situated on the line of intersection of the plane of the area and the free surface and the area being wholly immersed.

2. Show that the positions of equilibrium of a body floating in a homogeneous liquid are determined by drawing normals from the centre of mass of the body to the surface of buoyancy.

A right-angled triangular prism floats in a fluid of which the density varies as the depth, with the right angle immersed and the edges horizontal. Show that the curve of buoyancy is of the form

$$r^2 \sin^2 \theta \cos^2 \theta = c^2.$$

8. Discuss the stability of a solid of revolution floating in a heterogeneous liquid with its axis vertical and vertex downwards.

An oblate spheroid floats half immersed, with its axis vertical in a liquid the density of which varies as the square of the depth; prove that the height of the metacentre above the surface is

$$\frac{5}{8} \frac{a^2 - b^2}{b}.$$

4. Show that the intrinsic equation of the capillary curve is of the form

$$s = A \log \tan \frac{\psi}{4},$$

where  $A$  is a constant.

If a film under unequal internal and external pressures form a surface of revolution; prove that the inclination  $\phi$  of the tangent plane at  $P$  to the axis is given by the equation

$$\cos \phi = \frac{x}{a} + \frac{b}{x},$$

$x$  being the perpendicular from  $P$  on the axis and  $a, b$  constants.

5. Show that an ellipsoid with three unequal axes is a possible form of relative equilibrium for a mass of rotating liquid under gravitational forces.

A case in the form of a prolate spheroid of small ellipticity  $\epsilon$  is filled by a fluid nucleus of density  $\rho + \sigma$  surrounded by a fluid of density  $\rho$ . Show that if it rotates round its axis of figure with angular velocity  $\left(\frac{8}{5} \pi \rho \sigma\right)^{\frac{1}{2}}$ , a possible form of the common surface is a sphere.

### THIRD PAPER

*The questions are of equal value*

#### FIRST HALF

Answer ANY THREE

1. Explain the terms 'Principal axis' and 'Ellipsoid of gyration.'

Show that the locus of all principal axes which pass through a given point  $P$  is a cone of the second degree, which has generating lines parallel to the principal axes at  $G$ , the centre of inertia, and the locus of principal axes parallel to the line  $GP$  is the plane through  $GP$  which is the tangent plane.

If the point  $P$  move along the straight line  $GP$ , show that the cone will remain similar to itself.

2. Enunciate D'Alembert's principle; deduce the equations of two dimensional motion of a rigid body under finite forces and the equation of energy.

A solid homogeneous sphere is rolling on the inside of a fixed hollow sphere, the two centres being always in the same vertical plane. Shew that the smaller sphere will make complete revolutions if, when it is in its lowest position, the pressure on it is greater than  $\frac{7}{4}$  times its own weight.

3. A body with its c.g. fixed, is suddenly acted on by an impulsive couple. Work out the condition that it may begin to rotate about the axis of the couple.

A board of mass  $M$ , whose upper surface is rough and under surface smooth, rests on a smooth horizontal plane. A sphere of mass  $m$  is placed on the board and the board is suddenly given a velocity  $V$  in the direction of its length. Prove that the sphere will begin to roll after a time

$$\left\{ \frac{7}{2} + \frac{m}{M} \right\} \mu g,$$

$\mu$  being the coefficient of friction.

4. If a plate is jerked into motion by a string tied to a given point, the instantaneous centres corresponding to different directions of the string have a straight line locus; prove this.

A perfectly elastic ball spinning about a horizontal diameter with angular velocity  $\Omega$  is dropped vertically, and, after falling through a height  $h$ , strikes an imperfectly rough horizontal floor; if the coefficient of friction  $\mu$  is greater than

$$\frac{a\Omega}{7\sqrt{2gh}},$$

prove that the spin is immediately reduced to  $\frac{1}{7}$ th of its former value, and that the ball rebounds to a distance

$$\frac{4}{7}a\Omega \sqrt{\frac{2h}{g}}$$

on the floor. ( $a$  is the radius of the ball.)

5. A uniform circular disc is symmetrically suspended by two elastic strings of natural length  $l_0$  inclined at an angle  $\alpha$  to the vertical, and attached to the highest point of the disc. If one of the strings be cut, prove that the initial curvature of the path of the centre of the disc is

$$(l_0 \sin 4\alpha - l \sin 2\alpha) / l(l - l_0),$$

where  $l$  is the equilibrium length of each string.

## SECOND HALF

### Answer ANY THREE

6. If  $\psi, \theta, \phi$  be the Eulerian angles of a symmetrical top, moving on a perfectly rough plane ( $\psi$  = the azimuth round the vertical), derive the following integrals of the equations of motion :—

$$A\dot{\theta}^2 + A\dot{\psi}^2 \sin^2 \theta + C(\dot{\phi} + \dot{\psi} \cos \theta)^2 + 2Mgh \cos \theta = \text{constant},$$

$$A\dot{\psi} \sin^2 \theta + C(\dot{\psi} \cos \theta + \dot{\phi}) \cos \theta = a,$$

and  $C(\dot{\phi} + \dot{\psi} \cos \theta) = b$ ,

where  $A, A, C$  are the principal moments of inertia,  $M$  the mass, and  $h$  the distance of the centre of gravity from the apex.

If  $a = b$  in a nearly vertical top, deduce that the motion in  $\theta$  is stable, if

$$\frac{a^2}{4A} > Mgh.$$



7. Find an expression for the work done by an impulse on a rigid body capable of motion in two dimensions.

An impulse is applied to a wagon which carries inside it a cylindrical roller lying with its axis parallel to the axle of the wagon-wheels. Show that the energy imparted to the system is greater when the roller is free to roll than when it is rigidly connected to the wagon.

8. What are the dimensional relations between a generalized co-ordinate, and the corresponding generalized (i) force, (ii) momentum? If  $x_k$  be a cartesian co-ordinate of the  $k$ th particle in the dynamical system and  $q_r$  be the  $r$ th generalized co-ordinate, show that

$$\frac{\partial x_k}{\partial q_r} = \frac{\partial x}{\partial q_r}, \text{ and } \frac{d}{dt} \left( \frac{\partial x_k}{\partial q_r} \right) = \frac{\partial \dot{x}_k}{\partial q_r}.$$

With the help of Lagrange's equations of motion, find the tension of the string in a vibrating pendulum.

9. Discuss the conditions under which the Hamiltonian of a dynamical system equals the total energy and when it does not. Form the Hamiltonian for a sphere sliding without spin under the action of gravity inside a smooth tube which rotates with uniform angular velocity in a vertical plane.

10. Show that if the potential energy of a system in equilibrium be an essentially positive quadratic form in the co-ordinates, then under a small disturbance the system executes periodic motion.

Two particles are attached to different points of an elastic string of finite length stretched under a given tension. Write down the equations of small motion in the same plane.

## FOURTH PAPER

*The questions are of equal value*

### FIRST HALF

*Only THREE questions are to be attempted*

1. Distinguish between *limit* and *limiting point* of a sequence. Prove that limiting points of a bounded sequence must be limits of suitable subsequences. Give an illustration.

Evaluate

(i)  $\lim_{n \rightarrow \infty} (n)^{\frac{1}{n}}$ ;

(ii)  $\lim_{n \rightarrow \infty} \left( 1 - \frac{z^2}{\pi^2} \right) \left( 1 - \frac{z^2}{2^2 \pi^2} \right) \left( 1 - \frac{z^2}{3^2 \pi^2} \right) \dots \left( 1 - \frac{z^2}{n^2 \pi^2} \right)$ ;

(iii)  $\lim_{n \rightarrow \infty} \left\{ x^2 + \frac{x^2}{1+x^2} + \frac{x^2}{(1+x^2)^2} + \dots + \frac{x^2}{(1+x^2)^n} \right\}$ ,

for different values of  $x$ .

2. Define Uniform Convergence of an infinite series. Does uniform convergence imply absolute convergence? Illustrate your answer by an example.

Discuss the uniform-convergency of the series

$$(i) \frac{x}{1(x+1)} + \frac{x}{(x+1)(2x+1)} + \dots + \frac{x}{\{(n-1)x+1\}\{nx+1\}} + \dots, \text{ near } x=0;$$

$$(ii) 2 \sin \frac{1}{8s} + 4 \sin \frac{1}{8^2s} + \dots + 2^n \sin \frac{1}{8^ns} + \dots, \text{ near } s=0;$$

$$(iii) \cos s + \frac{1}{2} \cos^2 s + \frac{1}{3} \cos^3 s + \dots$$

3. State the conditions under which the differential co-efficient of the sum of an infinite series equals the sum of the series obtained by differentiating the former term by term.

Determine whether the series

$$\sum_{n=1}^{\infty} \frac{1}{n^3 + n^4 x^4}$$

represents a function whose differential coefficient is equal to the sum of the series obtained by differentiating in term by term.

Can the series

$$\frac{1}{1^2} + \frac{1}{2^2} + \frac{1}{3^2} + \dots$$

be integrated term by term? Give reasons for your answer.

4. Prove by means of integrals round closed contours :-

$$(i) \int \frac{\sin \pi x}{x} dx = \frac{\pi}{4};$$

$$(ii) \int_0^{\infty} \frac{\cos mx}{x^2 + a^2} dx + \frac{\pi}{2a^2} e^{-\frac{ma}{\sqrt{2}}} \sin \left( \frac{ma}{\sqrt{2}} + \frac{\pi}{4} \right);$$

$$(iii) \int_{-1}^1 \frac{e^{ax}}{1+e^x} dx + \frac{\pi}{\sin a\pi}, \text{ where } 0 < a < 1.$$

5. Expand  $\cot s$  in a series of fractions.

Prove that

$$\coth s = \frac{1}{s} + \sum_{n=1}^{\infty} \frac{2s}{s^2 + n^2 \pi^2};$$

and deduce

$$\frac{2}{e^s - e^{-s}} = \frac{1}{s} - \frac{2s}{s^2 + \pi^2} + \frac{2s}{s^2 + 2^2 \pi^2} - \frac{2s}{s^2 + 3^2 \pi^2} + \dots$$

## SECOND HALF

ANY THREE questions may be attempted

1. Prove that the differential equation

$$\frac{d^2 w}{dz^2} = p(z) \frac{dw}{dz} + q(z)w,$$

where  $p(z)$  and  $q(z)$  are uniform functions of  $z$  with only poles as singularities, has, in the neighbourhood of an ordinary point, a unique integral which together with its first derivative assume definite values at the point. How would you generalize this theorem for a similar equation of higher order?

2. What will be the forms of the coefficients  $p(z)$  and  $q(z)$  in Question 1 if  $z=\zeta$  be a nonessential singularity of the equation?

Find the regular integrals in the neighbourhood of the origin  $z=0$  of the equation

$$\frac{d^2 w}{dz^2} + \frac{1}{z} \frac{dw}{dz} - \frac{1}{z^2(1-z)} w = 0.$$

3. Examine the singularities of the Bessel equation

$$\frac{d^2 w}{dz^2} + \frac{1}{z} \frac{dw}{dz} + \left(1 - \frac{n^2}{z^2}\right) w = 0.$$

Prove that

$$\int_C e^{zt} \cdot \frac{(\sqrt{t^2+1}-1)^n}{\sqrt{t^2+1}} dt$$

is a solution of Bessel equation, the integral being taken along a path to be determined. Hence deduce Hankel's solutions.

4. Prove that

$$(i) P_n(z)Q_{n-1}(z) - Q_n(z)P_{n-1}(z) = \frac{1}{n},$$

where  $P_n$  and  $Q_n$  are Legendre's functions corresponding to index  $n$  (positive integer).

$$(ii) \frac{(-1)^n}{\sqrt{\pi r}} (2kr)^{n+\frac{1}{2}} \frac{d^n}{d\{(kr)^2\}^{\frac{1}{2}}} \left( \frac{\sin kr}{kr} \right) P_n^m(\cos \theta) \cos m\phi$$

is a solution of the wave equation.

5. Examine the point  $z=\infty$  of the equation

$$z(1-z) \frac{d^2 w}{dz^2} + \{\gamma - (1+\alpha+\beta)\} \frac{dw}{dz} - \alpha\beta w = 0.$$

Construct a series solution of this equation in the neighbourhood of the origin. How far will this solution be valid?

Give briefly the arguments showing that the above equation admits of 24 solutions in different forms.

6. If  $f(x) = \frac{1}{2}a_0 + \sum_n (a_n \cos nx + b_n \sin nx)$

be a Fourier series, what are the values of the coefficients? Assuming  $f(x)$  to be an absolutely integrable function of  $x$ , prove the  $\lim_{m \rightarrow \infty} a_m = 0$   $\lim_{m \rightarrow \infty} b_m = 0$ .

State (without proof) with explanation, if necessary, any sufficient test you know of the convergence of the Fourier series.

Find a sine series in multiples of  $\frac{\pi x}{a}$  for the function  $f(x)$  defined below

$$f(x) = mx \left( 0 < x < \frac{a}{2} \right)$$

$$f(x) = m(a-x) \left( \frac{a}{2} < x < a \right).$$

### FIFTH PAPER

*The questions are of equal value*

*Answer Questions 8 and 9 and FOUR from the rest*

1. If  $F(x, y, z, t) = 0$  be the equation of a moving surface, prove that the velocity of the surface normal to itself is  $-\frac{1}{R} \frac{\partial F}{\partial t}$ , where

$$R^2 = \left( \frac{\partial F}{\partial x} \right)^2 + \left( \frac{\partial F}{\partial y} \right)^2 + \left( \frac{\partial F}{\partial z} \right)^2.$$

Hence deduce that the equation of the bounding surface of a liquid satisfies the equation

$$\frac{\partial F}{\partial t} + u \frac{\partial F}{\partial x} + v \frac{\partial F}{\partial y} + w \frac{\partial F}{\partial z} = 0,$$

$u, v, w$  being the components of velocity at any point.

Shew that

$$\frac{x^2}{a^2} f_1(t) + \frac{y^2}{b^2} f_2(t) + \frac{z^2}{c^2} f_3(t) = 1$$

is a possible form of the bounding surface of a liquid, if

$$f_1(t)f_2(t)f_3(t) = 1.$$

2. In the case of steady motion of a fluid, obtain the equation

$$\int \frac{dp}{\rho} + \frac{1}{2} q^2 + V = C.$$

Is  $C$  an absolute constant?

Water flows steadily along a horizontal pipe of variable cross section. If the pressure be 700 millimetres of mercury at a place where the velocity is 150 cms. per second, find the pressure at a place where the cross section of the pipe is twice as large. [Take the specific gravity of mercury = 13.6.]

3. An infinitely long circular cylinder is moving perpendicular to its length in an infinite mass of liquid at rest at infinity. Show that the velocity potential of the liquid motion is the same as for a certain two-dimensional doublet on the axis of the cylinder in an infinite mass of liquid. Obtain an expression for the force opposing the motion.

The space between two fixed coaxial circular cylinders of radii  $a$  and  $b$  and between two planes perpendicular to the axis and distance  $c$  apart, is occupied by liquid of density  $\rho$ . Shew that the velocity potential of a motion whose kinetic energy shall equal a given quantity  $T$  is given by  $A\theta$ , where

$$\pi\rho A^2 c \log \frac{b}{a} = T.$$

4. Find the motion of an incompressible liquid inside a rotating ellipsoidal shell and calculate the kinetic energy of the liquid.

Find also the paths of the particles relative to the shell.

5. In the case of the motion of a solid in an infinite liquid express the components of impulse in terms of the components of velocity.

The space between two coaxial cylindrical shells of radii  $a, b$  is filled with incompressible liquid of density  $\rho$ . The outer shell, of radius  $a$ , is suddenly made to move with velocity  $U$ . Shew that the impulsive force per unit length necessary to be applied to the inner cylinder to hold it at rest is

$$\frac{2\pi\rho a^2 b^2 U}{a^2 - b^2}.$$

6. An infinitely long cylindrical vortex of finite circular section exists in an infinite mass of liquid. Find the stream function  $\psi$  and calculate the pressure at any point. Shew that, under certain circumstances, it is possible for a cylindrical hollow to exist inside the vortex.

7. Shew that the velocity of long waves in a liquid of depth  $h$  is  $\sqrt{gh}$ . Under what conditions the assumptions made in the proof are justified?

Trace the path of a surface particle when a progressive wave passes over it.

8. *Either,*

Investigate the nature of the two-dimensional liquid motion given by

$$(1) z = a \coth w,$$

$$(2) z = a \cos w,$$

$$(3) \frac{dw}{dz} = \frac{i}{z^2}.$$

In the two-dimensional motion of a liquid, there is a sink of strength 3 at the origin and a source of strength 2 at the point  $(a, 0)$ . Find the velocity potential and the stream function in polar co-ordinates referred to the origin as the pole and the  $x$ -axis as the initial line.

*Or,*

Prove that under certain conditions the circulation in any closed path moving with the fluid is constant for all time.

A cylinder full of liquid is rotating about an axis with a given angular velocity. The liquid is suddenly solidified, the angular velocity being maintained constant. In which case is the kinetic energy greater?

A cylinder whose cross section is an ellipse is rotating in an infinite mass of liquid at rest at infinity. The form of the cross section gradually changes and finally becomes a circle. State what happens, giving reasons for your answer.

9. A solid of revolution, whose meridian curve is

$$r = a\{1 + \epsilon p_n(\mu)\},$$

where  $\epsilon$  is small, moves with velocity  $U$  in the direction of its axis in a liquid at rest at infinity. Prove that the velocity potential of the irrotational motion set up, is

$$1. \frac{Ua^n}{r^n} P_n(\mu) - \frac{3\epsilon U}{2(2n+1)} \left\{ \frac{(n-1)a^{n+1}P_{n-1}(\mu)}{r^n} - \frac{(n+1)a^{n+3}P_{n+1}(\mu)}{r^{n+2}} \right\}.$$

## SIXTH PAPER

*The questions are of equal value*

### FIRST HALF

*Answer THREE questions*

1. (a) At a place in north latitude, two stars  $s$  and  $s'$  rise at the same time and  $s$  transits when  $s'$  is setting. Prove that

$$\tan \phi \tan \delta = 1 - \tan^2 \phi \tan^2 \delta',$$

$\phi$  being the latitude of the place, and  $\delta$  and  $\delta'$  the declinations of the stars.

(b) If  $h, H$  are the hour angles of a star, of declination  $+\delta$ , on the prime vertical (west) and at setting respectively, for a place in north latitude, show that  $\cos h \cos H + \tan^2 \delta = 0$ .

2. (a) Prove that the total refraction  $R$  due to the whole atmosphere is given by

$$R = a\mu_0 \sin z \int_1^{\mu_0} \frac{d\mu}{\mu(r^2\mu^2 - a^2\mu_0^2 \sin^2 z)^{\frac{1}{2}}}$$

(b) Show that the effect of refraction on the time of sunset may be determined by the formula

$$\Delta H = \frac{1}{15} \sec \phi \sec \delta \operatorname{cosec} H,$$

$H$  being the hour angle when the true zenith distance of the sun's centre is  $90^\circ$ , and  $35'$  the horizontal refraction.

3. (a) Determine the aberrational displacements of a star in latitude and longitude resulting from the motion of the earth in its elliptic orbit.

(b) Prove that the ellipse of aberration is the orthogonal projection of a circle in the plane of the ecliptic on the tangent plane touching the celestial sphere in the true place of the star.

4. (a) Prove the following formulæ which give the annual changes in the right ascension and declination of a star owing to precession :—

$$\Delta \alpha = \Delta \lambda (\cos w + \sin w \sin \alpha \tan \delta)$$

$$\Delta \delta = \Delta \lambda \sin w \cos \alpha.$$

(b) Show that if  $S$  be a star without precession in R.A., and  $P, K$  the poles of the equator and the ecliptic respectively, then  $SP$  and  $SK$  will be at right angles.

5. (a) Show that at any place and at any moment the sidereal time  $t$ , the mean time  $T$ , the right ascension of the sun  $\alpha$  and the equation of time  $E$  are connected by the relation

$$t - \alpha + E - T = 0.$$

(b) Prove that, when the equation of time is a maximum or minimum, the sun's longitude  $\odot$  is given by

$$(1 - e^2)^{\frac{3}{2}} (\cos^2 \odot + \cos^2 \omega \sin^2 \odot) = \cos^2 \omega \{ 1 + e \cos (\odot - \omega) \}^3,$$

where  $\omega$  is the longitude of perihelion.

## SECOND HALF

*Attempt Question No. 7 and ANY TWO of the rest*

6. Show that the parallax in declination of a planet observed from a place in latitude  $\phi$  vanishes if

$$\tan \phi = \tan \delta \cos H.$$

$\delta$  and  $H$  being the planet's declination and hour angle, respectively, and the earth being assumed spherical.

Prove that the cosine of the angle between the directions in which a star is displaced by annual parallax and annual aberration is

$$\sin 2(\odot - \lambda) \cos^2 \beta [4 \sin^2 \beta + \cos^2 \beta \sin^2 2(\odot - \lambda)]^{-\frac{1}{2}},$$

where  $\beta$ ,  $\lambda$ ,  $\odot$  are the latitude and longitude of the star and the longitude of the sun, respectively.

7. The heliocentric distance of an inferior planet  $P$  moving in a circular orbit in the ecliptic, is  $b$  astronomical units; the orbit of the earth  $E$  is also assumed circular. If the heliocentric co-ordinates of  $P$  and  $E$  are  $(b \cos k\theta, b \sin k\theta)$  and  $(\cos \theta, \sin \theta)$  respectively,  $\theta$  being measured from inferior conjunction, show that for a stationary point

$$\cos (k-1) \theta = \frac{1+kb^2}{b(1+k)}$$

8. You are supplied with two meridian circles  $A$  and  $B$ .  $A$  has an azimuth error  $a$  and a level error  $b$ , while  $B$  is perfect :

(i) To what amount will the time of transit of a star be affected if the observation is carried out by  $A$ ?

(ii) If a known star of declination  $\delta$  be seen to pass the cross-wires of the two instruments ( $A$  and  $B$ ) simultaneously, show that the latitude of your observatory is

$$\phi = \delta - \tan^{-1} \left( \frac{b}{a} \right).$$

9. Explain how you would find the time of sunrise, when the longitude  $\lambda$  is given, and deduce the equation to represent the daily retardation in the hour of rising of the sun.

Show that the time taken by the sun's disc to rise above the horizon is greatest at the solstices and least at the equinoxes.

10. State Kepler's laws and deduce Newton's law of inverse square.

If in an elliptic orbit of a planet about the sun in one focus the square of the eccentricity may be neglected, show that the angular velocity of the planet is uniform about the unoccupied focus.

**SEVENTH PAPER**  
**(ELASTICITY—FIRST PAPER)**

*The questions are of equal value*

**FIRST HALF**

*Only THREE questions are to be attempted*

1. What do you understand by a 'pure strain'? Prove that any elastic displacement ( $u, v, w$ ) can be expressed in the form

( $u, v, w$ ) = gradient of a scalar potential  $\phi$

+ the curl of a vector potential ( $F, G, H$ ).

2. Show that any stress-system at a point is equivalent to tension (or pressure), the same in all directions round the point, together with tangential tractions across three planes which cut each other at right angles.

If  $u, v, w$  are the components of any vector quantity and  $X_{xx}, X_{xy}$ , etc., are the components of any stress, shew that the three quantities

$$X_{xx}u + X_{xy}v + X_{xz}w, X_{xy}u + Y_{xx}v + Y_{xz}w, X_{xz}u + Y_{xy}v + Z_{xx}w$$

are the components of a vector.

3. A spherical shell whose inner and outer radii are  $r_1$  and  $r_0$  is subjected to internal and external pressures  $p_1$  and  $p_0$  respectively. Shew that the displacement  $U$  is given by

$$U = \frac{1}{3\lambda + 2\mu} \cdot \frac{p}{r_0^3 - r_1^3} \cdot r + \frac{1}{4\mu} \cdot \frac{r_0^3 r_1^3 (p_1 - p_0)}{r_0^3 - r_1^3} \cdot \frac{1}{r^3}.$$

Calculate the values of  $\gamma\gamma$  at any point in the shell.

4. Prove that in an isotropic solid of volume  $V$ , the average value of  $\Delta$  is

$$\frac{1}{3kV} \iiint \rho(X \cdot x + Y \cdot y + Z \cdot z) \, dxdydz + \frac{1}{3kr} \iint (xX_r + yY_r + zZ_r) \, dS.$$

A vessel of any form of internal volume  $V_1$  and external volume  $V_0$  is subjected to internal pressure  $p_1$  and external pressure  $p_0$ , find the change in the volume  $V_0 - V_1$ .

5. State and prove the theorem of minimum potential energy.

Prove that the potential energy of deformation of a body which is under a given load, is equal to half the work done by the external forces, acting through the displacements from the unstressed state to the state of equilibrium.

**SECOND HALF**

*Only THREE questions are to be attempted*

1. Explain Saint Venant's Principle.

Work out fully the problem of a bar bent by terminal couples only. Find the relation between the bending moment and curvature and calculate the potential energy of strain.

2. If the material possesses three orthogonal planes of symmetry at every point, shew that the strain-energy function is of the form

$$2W = Ae_{xx}^2 + Be_{yy}^2 + Ce_{zz}^2 + 2Fe_{xy}e_{xx} + 2Ge_{xx}e_{zz} + 2He_{xy}e_{zz} + Le_{xy}^2 + Me_{xx}^2 + Ne_{zz}^2;$$

and obtain an expression for the Young's modulus in such material for an arbitrary direction ( $l, m, n$ ).



8. Prove that the elastic displacements at any point of a body bounded by an infinite plane (plane of  $x, y$ ), produced by the distribution of pressure  $P'$  per unit of area on the bounding plane is given by

$$\frac{\partial \Omega}{\partial x}, v = -\frac{\partial \Omega}{\partial y}, w = -\frac{\partial \Omega}{\partial z} + \frac{\lambda + 2\mu}{2\pi\mu(\lambda + \mu)} \phi,$$

where

$$-\frac{z\phi}{4\pi\mu} + \frac{1}{4\pi(\lambda + \mu)} \iint P' \log(z + \gamma) dx' dy',$$

and

$$\phi + \iint \frac{P'}{\gamma} dx' dy'.$$

4. Find the stress-system in two dimensions in the case of an isotropic plate a given force being applied at a given point of the boundary in a given direction.

Shew that the corresponding stress function is of the form

$$-\frac{F}{\pi} r\theta \sin \theta,$$

where  $F$  is the force applied and the initial line is taken along the line of action of the force.

5. The displacements on the surface of an elastic sphere, free from the action of body-forces, being given in terms of surface harmonics, find the displacements, at any point within the sphere.

## EIGHTH PAPER

### (ELASTICITY—SECOND PAPER)

*The questions are of equal-value*

#### FIRST HALF

*Only THREE questions are to be attempted*

1. Explain the analogy between the torsion problem and the problem of irrotational motion of frictionless liquid in a rotating cylindrical vessel.

Work out the torsion-problem for a prism of rectangular cross-section.

2. Solve the flexure-problem for a beam of rectangular cross-section.

3. A rod is slightly bent by the application of a force along its length. Find the form of the bent rod.

Find the limits of the length of the rod that can be bent by given forces in the cases (1) when both the ends are bent, (2) when one end is constrained to remain in the same direction as the force, and (3) when both the ends are so constrained.

4. Shew how the stresses in a thin plate can be specified.

In the case of a plate bent by transverse forces only, obtain, according to the approximate theory, the equation

$$\frac{2}{3} \frac{Eh^3}{1-\sigma^2} \nabla^2 \omega = Z',$$

5. Find the frequency-equation for the 'rotatory vibrations' of an isotropic sphere, viz.,

$$\tan ka = \frac{8ka}{3-k^2a^2}, \text{ where } k^4 = \frac{2^2\rho}{\mu}.$$

## SECOND HALF

*Not more than THREE questions are to be answered*

1. A thin elastic rod is bent and twisted by any forces and couples. Obtain the equations of equilibrium.

Assuming that the stress-couples are proportional to the curvatures and twist, obtain an integral of the equations of equilibrium in the case when there are no body forces.

2. A long heavy rod is set up vertically with one end embedded in the ground. Find the length of the rod when it will be bent by its own weight.

3. Obtain the equations of flexural vibrations of a straight thin rod. Hence find the frequency-equation when both ends of the rod are clamped.

4. Obtain the equation of flexural vibrations of a thin circular ring in its own plane and hence prove Hoppe's formula for frequency, *viz.*,

$$p^2 = \frac{E\pi c^4}{4ma^4} \cdot \frac{n^2(n^2-1)^2}{n^2+1}.$$

5. A heavy beam with built-in ends rests horizontally. Find the deflection at any point of the beam.

## SEVENTH PAPER

## (LUNAR AND PLANETARY THEORIES—FIRST PAPER)

*Attempt the SECOND and the NINTH question and ANY THREE of the remaining questions*

1. Assuming the usual notation of the Lunar Theory, explain the physical meaning of the following equations :—

(i)  $S = k \sin(g\theta - \gamma)$

(ii)  $S = k \sin(g\theta - \gamma) + \frac{1}{2}mk \sin\{(2-2m-g)\theta - 2\beta + \gamma\}$ .

2. Investigate the effect of the annual equation on the length of the lunar month.

Assuming  $m = .075$ ,  $e' = .017$ ,  $\sin 13^\circ 30' = .23345$  and the mean period of a sidereal revolution of the moon =  $27d, 7h, 43m, 12s.$ , find the difference between a winter and a summer month.

3. For the elliptic motion of a particle, establish

$$\frac{r}{a} = 1 + \frac{e^2}{2} - \left( e - \frac{3}{8}e^3 \right) \cos w - \frac{1}{2}e^3 \cos 2w - \frac{8}{8}e^3 \cos 3w,$$

neglecting  $e^4$  and higher powers of  $e$ ; also find the exact value of  $r$  in series involving Bessel functions; where  $r$ =radius vector,  $e$ =eccentricity, and  $w$ =mean anomaly.

4. Show that the effect of the parallactic inequality is to slightly distort the variational curve in the direction of the sun.

5. Suppose the disturbed body moves in a resisting medium, determine the equations for the variations of the six elements.

6. Show that the evection in the longitude, *viz.*

$$\frac{15}{4}me \sin\{(2-2m-c)pt - 2\beta + \alpha\},$$

may be represented as the joint effect of certain periodic changes in the eccentricity of the lunar orbit and in the mean longitude of its apse.

7. Lagrange's Theorem states that it is possible to start three finite bodies in such a manner that their orbits will be similar ellipses, all described in the same time. Establish this for the special case in which the orbits are circles.

8. If  $r$  is the longitude of the moon,  $\theta (= \tan^{-1} s)$  its latitude,  $R$  the radius vector,  $m_0$  and  $m$  the masses of the earth and the moon respectively, and

$u = \frac{1}{R \cos \theta}$ , prove that the equations of the motion of the moon are

$$\begin{aligned} \frac{d^2 u}{dr^2} + u + \frac{u^{\frac{1}{2}} \frac{\partial \Omega}{\partial r} \frac{du}{dr} - \frac{\partial \Omega}{\partial u} - \frac{\theta}{u} \frac{\partial \Omega}{\partial s}}{h^2(1+2\rho)} &= 0, \\ \frac{d^2 \theta}{dr^2} + s + \frac{\frac{\partial \Omega}{\partial r} \frac{ds}{dr} - us \frac{\partial \Omega}{\partial u} - (1+s^2) \frac{\partial \Omega}{\partial s}}{h^2 u^2 (1+2\rho)} &= 0, \end{aligned}$$

where

$$\rho = \frac{1}{h^2} \int \frac{1}{u^3} \frac{\partial \Omega}{\partial r} dr,$$

$h$  is a certain constant,

$$\Omega = \frac{f(m_0 + m)}{R} + R_1,$$

and  $R_1$  is the disturbing function connected with the sun.

9. Explain how to prove that the normal variation from Hill's periodic orbit for the moon satisfies an equation of the form

$$\frac{d^2 \sigma}{dt^2} + \sigma (\Theta_0 + 2\Theta_1 \cos 2\tau + \dots) = 0.$$

Prove that the solution of this equation is by a series in terms of the form  $\exp[(2n+c)i\tau]$ , where  $n$  is an integer, and obtain an approximate value for  $c$  when  $\Theta_0$  is nearly 1 and  $\Theta_1$  is small.

## EIGHTH PAPER

### (LUNAR AND PLANETARY THEORIES—SECOND PAPER)

*The questions are of equal value*

*Attempt the FIRST and the SEVENTH question and THREE of the remaining questions*

1. If  $R$  be expressed as a function of  $t$  and the usual elements, obtain the formulæ

$$\frac{d\Omega}{dt} = \frac{1}{h \sin i} \frac{dR}{di}, \quad \frac{di}{dt} = \frac{\cot(\theta - \Omega)}{h} \frac{dR}{di};$$

where  $\theta$  is measured of the plane of reference as far as the node, and thence on that of the orbit, and

$$h = r^2 \left( \frac{d\theta}{dt} - 2 \sin^2 i \cdot \frac{i}{2} \frac{d\Omega}{dt} \right).$$

2. Considering only secular variations, obtain the following equations :—

$$\Sigma \left( m \sqrt{ae^3} \frac{d\bar{\omega}}{dt} \right) = C, \quad \Sigma \left( m \sqrt{a} \tan^2 i \frac{d\Omega}{dt} \right) = C'.$$

3. Define the instantaneous ellipse.

Prove that

$$(i) \quad \frac{da}{dt} = \frac{2na^3}{\mu} \frac{dR}{d\epsilon}.$$

$$(ii) \quad \frac{de}{dt} = \frac{na(1-e^2)}{\mu e} \frac{dR}{d\epsilon} - \frac{na\sqrt{1-e^2}}{\mu e} \left( \frac{dR}{d\epsilon} + \frac{dR}{d\bar{\omega}} \right).$$

4. Integrate the equation

$$\frac{d^2}{dt^2} (r\delta r) + n^2 r\delta r = \Sigma \left\{ P \cos (pnt + Q) \right\},$$

determining the arbitrary constants so that  $\delta r = 0$ , and  $\frac{d}{dt} \delta r = 0$  when  $t = 0$ ; and show that for small values of  $t$

$$r\delta r = \Sigma \left( \frac{Pt^2}{2} \cos Q \right),$$

the case of  $p = 1$  being included.

5. A planet is moving in a resisting medium, the resistance being

$$kp \left( \frac{ds}{dt} \right)^2.$$

Prove that

$$\frac{da}{du} = -2kpa^2(1 + e \cos u) \sqrt{\left( \frac{1 + e \cos u}{1 - e \cos u} \right)}$$

$$\frac{de}{du} = -2kpa(1 - e^2) \cos u \sqrt{\left( \frac{1 + e \cos u}{1 - e \cos u} \right)}$$

where  $u$  is the eccentric anomaly.

6. Write notes on Lagrange's Brackets, clearly bringing out their utilities.

7. If  $n$  bodies are subject to no forces except their mutual attractions, prove

- (i) their centre of mass moves in a straight line with uniform speed;
- (ii) the sum of their kinetic and potential energies is a constant;
- (iii) the sums of the products of the masses and the projections of the areas described by the corresponding radii are proportional to the time.

8. Given the equations

$$\tan^2 i = N_1^2 + N_2^2 + 2N_1 N_2 \cos (h_1 t + \delta_1 - \delta_2),$$

$$\tan \Omega = \frac{N_1 \sin (h_1 t + \delta_1) + N_2 \sin \delta_2}{N_1 \cos (h_1 t + \delta_1) + N_2 \cos \delta_2},$$

explain the nature of the motion of the node, when the minimum inclination is zero.

## SEVENTH PAPER

## (GEODESY AND GEOPHYSICS—FIRST PAPER)

*The questions are of equal value*

*Not more than SIX questions are to be answered, of which  
Question No. 2 must be one*

1. Obtain Bessel's expression for the length of a meridian arc between two stations,

$$S = \frac{R a^2 (1 - e^2)}{(1 + \sqrt{1 - e^2})^2} \left[ a_0 \Delta \phi + \sum_{r=1}^{\infty} a_r \sin r \Delta \phi \cos 2r \phi_0 \right],$$

where  $\Delta \phi$  is the difference between the latitudes of the two stations,  $\phi_0$  the mean of their latitudes, and the  $a$ 's constants whose values you are required to determine.

The meridian distance between two stations very near to each other is usually obtained by multiplying the small difference of latitudes by the radius of curvature of the meridian at the mean latitude. Calculate the error involved.

2. Define average error, mean square error, and probable error and find their values in terms of the precision measure  $k$ .

A certain length  $AB$  is measured four times and 52.81 cms., 52.82 cms., 52.82 cms., and 52.80 cms. are the measurements. Calculate the probable error in the adopted value of  $AB$ .

3. Four observations of equal weights give the following equations :—

$$x - y + 2z = 8.$$

$$3x + 2y - 5z = 5.$$

$$4x + y - 4z = 21.$$

$$-x + 3y + 8z = 14.$$

Find the best values of the quantities  $x$ ,  $y$ ,  $z$ .

4. Describe with theory what is known as Flamsteed's projection. What are its advantages and disadvantages?

5. Define a geodesic on a surface. Is it the shortest distance between any two points on it? Obtain the characteristic equation of the geodesic on a spheroidal earth in the form

$$\cos u \sin \alpha = \text{constant}.$$

Discuss whether a geodesic on the earth is a closed curve or not.

6. Calculate the height of the tower that is to be constructed at a station  $A$  so as to be just visible from a second station  $B$ .

Explain how the height of a station makes a correction in the azimuth necessary and find an expression for this correction.

7. Show that the difference between the front and back azimuths of two neighbouring stations is given by

$$-\Delta \alpha'' = \Delta \lambda'' \frac{\sin \phi_m}{\cos \frac{\Delta \phi}{2}} + \frac{1}{12} (\Delta \lambda'')^3 (\text{arc } 1'')^2 \sin \phi_m \cos^3 \phi_m,$$

where  $\Delta \lambda$ ,  $\Delta \phi$  are the differences in longitudes and latitudes of the two stations and  $\phi_m$  the mean of their latitudes.

Calculate the difference of longitudes between two stations from a knowledge of the distance between them, the azimuth of the second station with respect to the first and the latitude of the second station.

8. What are the principal corrections necessary for the determination of the absolute value of  $g$  from pendulum experiments? Work out in detail the correction for finite amplitude and the air correction.

9. What do you mean by 'the height of a station above another'? In the determination of heights by barometer, establish the following expression for heights in metres.

$$H - H_A = 18400(1 + \alpha t) \left( 1 + 0.877 \frac{\rho}{p} \right)$$

$$(1 + \beta \cos 2\theta) \left( 1 + \frac{2H}{R} \right) \log_{10} \frac{p_A}{p}.$$

What is 'the dynamical height'? Calculate it in this case.

## EIGHTH PAPER

### (GEODESY AND GEOPHYSICS—SECOND PAPER)

*The questions are of equal value*

*Not more than six questions are to be attempted*

1. Assuming that surfaces of equal densities inside the earth are concentric and coaxial spheroids, prove that the ellipticity of the stratum of equal density increases from the centre of the earth outwards.

2. What is the theory of Darwin and Callandean regarding the distribution of density inside the earth? Give a short account of Wiechert's hypothesis about this distribution of density.

3. If the country surrounding a station  $S$  be divided into compartments by drawing concentric circles having  $S$  as centre and radial lines through  $S$  and if a compartment be bounded by circles of radii  $r_1, r_2$  and radial lines of azimuths  $\alpha_1, \alpha_2$  and if  $h$  be the height of the upper surface of the compartment above  $S$ , prove that the deflection of the plumb-line in the plane of the meridian is given by the formula

$$D = 12'' \cdot 44 \frac{\delta}{\rho_m} \Delta h (\sin \alpha_2 - \sin \alpha_1) \log \frac{r_2}{r_1}$$

where  $\delta$  is the surface density and  $\rho_m$  the mean density of the earth.

4. Give a short account of the irregularities in the results of gravity observations. Describe briefly the theories propounded for their explanation.

5. Obtain Laplace's dynamical equations of the tide and indicate how you propose to solve the equations.

6. Obtain Airy's equation of the forced oscillation of water in a canal of uniform depth.

Assuming the moon's orbit to be circular and coincident with the plane of the earth's equator, discuss the tidal oscillations in a canal coincident with the meridian.

7. Shew that in an isotropic elastic solid, two kinds of waves are possible. Taking the case of plane harmonic waves, discuss the characteristics of the two types.

8. Describe briefly Galitzin's horizontal seismometer.

What are the main features of an ordinary seismic record?

Describe a method for the determination of the epicentre of an earthquake.

## SEVENTH PAPER

## (ELECTRICITY AND MAGNETISM—FIRST PAPER)

*The questions are of equal value*

## FIRST HALF

*Try THREE questions only*

1. Show that an electrostatic field may be constructed by a system of stresses in the medium but that nevertheless the medium cannot be regarded as elastic.

Prove that the mechanical force on the surface of a charged conductor  $= \frac{R^2}{8\pi}$  dynes per sq. cm., where  $R$  is the normal field intensity at the surface.

2. A sphere of soft iron of permeability  $\mu$  is placed in a uniform magnetic field along the  $z$ -axis. Find the altered magnetic potential inside and outside the sphere.

Show further that the lines of force external to the sphere lie on surfaces of revolution of the form

$$\left\{ 1 + \frac{2(\mu-1)}{\mu+2} \cdot \left( \frac{a}{r} \right)^2 \right\} (x^2 + y^2) = \text{const.},$$

where  $a$  is the radius of the sphere.

3. Explain how for stationary currents a magnetic vector potential  $\vec{A}$  may be found, which satisfies the equation

$$\nabla^2 \vec{A} = -\frac{4\pi\mu}{c} \cdot \vec{i},$$

and show that the energy of the system may be expressed as

$$\frac{1}{2} L_{11} j_1^2 + L_{12} j_1 j_2 + \frac{1}{2} L_{22} j_2^2 + \dots$$

Find the dimension of the  $L$ 's in Gaussian electrostatic units and the induction through a closed circuit by the Lagrange method.

4. Two currents of strengths  $j_1$  and  $j_2$  flow in the same sense round two squares each of side  $a$ , placed with their edges parallel to one another and at right angles to the distance  $c$  between their centres. Show that they attract with a force

$$8j_1 j_2 \left\{ \frac{c\sqrt{2a^2 + c^2}}{a^3 + c^3} + 1 - \frac{a^3 + 2c^3}{c\sqrt{a^2 + c^2}} \right\}.$$

5. Work out the radiation field of a Hertzian oscillator, and the mean rate of dissipation of energy.

Explain how it is possible by superposition of two suitable oscillators to effect a directed radiation.

## SECOND HALF

Attempt ANY THREE questions

1. What are the principal differential laws of an electrostatic field? Give the corresponding integral laws with full explanations.

A condenser is formed of two concentric spherical conductors of radii  $a$  and  $b$  separated by two dielectrics bounded by a concentric sphere of radius  $c$ .

If in one dielectric the specific inductive capacity  $k = \frac{\mu}{\mu_0}$  and in the second

$k' = \frac{\mu'}{\mu_0}$  ( $r$  being the distance from the centre), show that at each point of a dielectric the electric intensity is constant and the capacity  $C$  of the system is given by

$$\frac{1}{C} = \frac{c-b}{\mu} + \frac{b-a}{\mu'}.$$

2. Find the energy of an electrostatic field.

A dielectric sphere of radius  $a$  and dielectric constant  $\epsilon$  is brought in a uniform electric field  $E_0$  in vacuum. Show that energy of the field is diminished by

$$-\frac{a^3}{2} \cdot \frac{\epsilon-1}{\epsilon+1} E_0^2,$$

it being given that the polarisation of a dielectric sphere of radius  $a$  in a uniform field  $E$  is

$$\frac{3}{4\pi} \frac{\epsilon-1}{\epsilon+2} E.$$

3. Discuss the potential function which can represent the field in the neighbourhood of a steady straight current. What is the exact mathematical relation between the current and this field? Show that the energy of a current of density  $i$  is given by the integral

$$-\frac{1}{2c} \int (iA) dv,$$

where  $A$  is a vector to be interpreted.

4. Prove that the current in a circuit containing a capacity  $K$ , resistance  $R$ , and self-induction  $L$  is given by the equation

$$\frac{LK}{\alpha^2} \frac{d^2 i}{dt^2} + RK \frac{di}{dt} + i = 0.$$

Find the condition for an oscillatory current. Show that when the resistance and capacity are fixed and the self-induction is varied there is a maximum frequency. Find this maximum.

5. Write notes on any two of the following :—

(a) The units in electrical theory

(b) Propagation of plane electromagnetic waves in dielectrics and conductors.

(c) Electromagnetic Induction.



## EIGHTH PAPER

## (ELECTRICITY AND MAGNETISM—SECOND PAPER)

*The questions are of equal value*

*Try six questions only*

1. State Minkowski's field equations in terms of two antisymmetric tensors and interpret them for a moving medium in terms of the four field vectors used in Maxwell's presentation.

Describe the experiment of Röntgen-Eichenwald and explain it on the basis of the Minkowski equations.

2. Deduce the law of aberration by use of Lorentz transformation.

Find by use of the principle of energy the radiation pressure on a moving mirror.

3. Define, after Abraham, a magneton.

Prove that an external electromagnetic field produces on a magneton (with spherical symmetry) *firstly* a couple of moment

$$-\frac{I}{C} \left\{ \frac{\partial \vec{H}}{\partial t} - \left[ \frac{\vec{\omega}}{\omega} \vec{H} \right] \right\}$$

where  $\vec{H}$  is the external magnetic field,  $\vec{\omega}$  is the angular velocity of the magneton, and  $I$  is a moment of inertia of the magneton.

4. Obtain after Langevin the relation between the intensity of induced magnetisation ( $M$ ) and the external field ( $H$ ) for a paramagnetic gas in the form

$$M = M_0 \left\{ \coth a - \frac{1}{a} \right\}$$

where

$$a = \frac{m_0 H}{kT}.$$

5. For any system of charges which hold together and move as a whole  
 $\vec{v}$   
 with a constant velocity  $\vec{v}$ , obtain the relation

$$\vec{G} = \frac{W}{C^2} \vec{v}$$

where  $\vec{G}$  is the electromagnetic momentum and  $W$  the energy.

Hence deduce after Abraham the Lagrange function for an electron in the form

$$L = -m_0 c^2 \sqrt{1 - \beta^2}$$

where  $\beta = \frac{v}{c}$ .

6. Give on the basis of the Lorentz theory an explanation of electro-optic double refraction and of the corresponding absorption phenomena.

7. Investigate the theory of retarded potentials and find expressions for the vector and scalar potentials at a point  $P$  due to an electric charge. Prove that the scalar potential at a point  $\mathbf{r}$  for the distribution of density  $\rho$  at the point  $\mathbf{r}'$  is given by

$$\phi = \int d\Omega \int_0^\infty \rho \left( \mathbf{r}', t - \frac{R}{c} \right) R dR.$$

where  $R = |\mathbf{r} - \mathbf{r}'|$ ,  $d\Omega$  being the elementary solid angle at the point  $P$ , and the vector potential

$$\mathbf{A} = \int d\Omega \int j \left( \mathbf{r}', t - \frac{R}{c} \right) R dR.$$

8. Deduce the expression for Poynting's Vector for electromagnetic radiation. Prove that for an oscillating electron, the radiation of energy at any instant is

$$\frac{2}{3} \frac{e^2 w^2}{c^3},$$

where  $w$  is the acceleration.

9. Examine the effect of a magnetic field on an electron oscillating under an electric field (Faraday effect) and prove that the gyration vector has the form

$$\frac{\omega e^2 H}{cm^2(\omega_0^2 - \omega^2)}$$

where  $\omega_0/2\pi$  is the frequency of the free electron and  $\omega/2\pi$  the modified frequency,  $m$  the mass, and  $H$  the magnetic field.

10. Explain fully Einstein's conception of simultaneity and shew that it is equivalent to the constancy of the speed of light in all directions and to all observers.

Verify that the transformation

$$x = x' \cosh \alpha + ct' \sinh \alpha, \quad y = y'$$

$$t = t' \cosh \alpha + \frac{x'}{c} \sinh \alpha, \quad z = z'$$

transforms

$$x^2 + y^2 + z^2 - c^2 t^2$$

into

$$x'^2 + y'^2 + z'^2 - c^2 t'^2.$$

If

$$\alpha = \frac{1}{2} \log \left( \frac{c+v}{c-v} \right),$$

shew that this transformation is the same as that of the special relativity theory.

## SEVENTH PAPER

## (ADVANCED DYNAMICS—FIRST PAPER)

*The questions are of equal value*

*Not more than FIVE questions are to be attempted*

1. Explain the method of moving axes as used in Dynamics.

A rod  $AB$  is suspended by a string from a fixed point  $\theta$  and is moving in any manner; obtain an expression for the angular momentum about axes arbitrarily chosen.

2. A uniaxial top spins on a perfectly rough table with its axis nearly vertical. Find the motion.

Find the small oscillations of the top.

3. In the case of bodies acted upon by impulses, compare Kelvin's and Betrand's theorems and deduce the principle of least constraint.

Deduce Appell's equations of motions of systems which are non-holonomous.

4. Obtain the equations of motion of a dynamical system in terms of the modified Lagrangian function.

Given the equation of vis viva in generalized co-ordinates, find the form of the modified function.

5. A particle is dropped from a height  $h$  and falls to the earth. If the resistance of the air be  $kv^2$ , where  $v$  is the relative velocity of the particle and air, show that the deviation to the south is zero, but the deviation to the east is

$$\frac{1}{3} \omega \cos \lambda g t^3 \left\{ 1 - \frac{3kg^{n-1}t^n}{(n+1)(n+2)} \right\},$$

where  $\omega$  is the angular velocity of the earth,  $\lambda$  is the latitude of the point where the particle falls, and  $t$  is the time of descent, the squares and higher powers of  $k$  being neglected.

6. Investigate the motion of a body about a fixed point in it under no extraneous forces.

A solid cube is in motion about an angular point which is fixed. If  $\omega_1, \omega_2, \omega_3$  be the angular velocities about the three edges through the fixed point at any instant, and there be no extraneous forces in action, prove that

$$\omega_1 + \omega_2 + \omega_3 \text{ and } \omega_1^2 + \omega_2^2 + \omega_3^2$$

are each constant.

7. A perfectly rough sphere of radius  $c$  is made to rotate about a vertical diameter which is fixed, with a constant angular velocity  $n$ . A uniform sphere of radius  $a$  is placed on it at a point distant  $ca$  from the highest point of the rotating sphere, and is allowed to roll under gravity. Investigate the motion and determine in any position the angular velocity of the rolling sphere. Shew that the rolling sphere will leave the rotating sphere when the point of contact is at an angular distance  $\theta$  from the vertex of the rotating sphere, where

$$\cos \theta = \frac{10}{17} \cos \alpha + \frac{4}{119} \frac{c^2 n^2 \sin^2 \alpha}{(a+c)g}.$$

[Notice the initial impact.]

8. Obtain the general equations of motion of a thin circular disc on a perfectly rough horizontal plane.

Determine the least angular velocity with which the disc must be started in order that it may roll steadily in a straight line or very nearly in a straight line.

9. Given the kinetic and potential energies of a system having  $n$  degrees of freedom and performing small oscillations about its position of equilibrium in any set of generalised co-ordinates, show how to express them in terms of principal co-ordinates.

If the inertia of any part of the system is increased without altering the forces, investigate the change in the periods referred to principal co-ordinates.

## EIGHTH PAPER

### (ADVANCED DYNAMICS—SECOND PAPER)

*The questions are of equal value*

*Not more than FIVE questions are to be attempted*

1. State the *Principle of Least Action* and explain it fully. Why is it called a *principle*? Show that the *action* is not always a minimum and determine the circumstances under which it is really a minimum.

Deduce Lagrange's equations of motion from the *Principle of Least Action*.

2. State and prove Jacobi's Theorem on the complete solution of a dynamical problem by means of a suitable integral of Hamilton's partial differential equation. Use this theorem to obtain the complete solution for the motion of a particle in a straight line under a central attraction varying inversely as the square of the distance.

3. Obtain expressions for the moments of the Sun's gravitational forces on the earth about a set of principal axes of the latter at its centre of mass and deduce expressions for the *solar precession* and *nutation*.

4. Prove that the polar equations of motion of an inextensible string in two dimensions can be obtained in the following form:—

$$\frac{\partial u}{\partial t} - \frac{v^2}{r} = \frac{1}{m} \frac{\partial T}{\partial s} \cos \phi - \frac{T}{mr} \sin \phi + P,$$

$$\frac{\partial v}{\partial t} + \frac{uv}{r} = \frac{1}{mr} \frac{\partial}{\partial s} (Tp) + Q,$$

$$-\sin \phi \frac{\partial \phi}{\partial t} = \frac{\partial u}{\partial s}, \quad \cos \phi \frac{\partial \phi}{\partial t} = \frac{\partial v}{\partial s} + \frac{u \sin \phi}{r} - \frac{v \cos \phi}{r},$$

where the various symbols have suitable meanings.

A uniform inelastic string in the form of a circle of radius  $a$  rests on a smooth plane under a central repulsion whose measure at a distance  $r$  is  $ka^2/r^2$ . Show that if the string be slightly displaced so that initially it is at rest and in the form

$$r = a + \sum_{n=1}^{\infty} a_n \cos n\theta,$$

then at any subsequent time  $t$  its form will be determined by

$$r = a + \sum_{n=1}^{\infty} a_n \cos n\theta \cos m \left\{ \frac{k}{a} \cdot \frac{m^2 + n - 2}{m^2 + 1} \right\}^{\frac{1}{2}} t$$

5. A string of length  $l$  is stretched at a tension such that the velocity of a wave is  $c$ . One extremity is fixed while the other is agitated by a transverse force so that the displacement at any time  $t$  is  $Q \sin pct$ . If the string is initially straight and starts from rest, show that the displacement at a distance  $x$  from the fixed end at time  $t$  is

$$Q \left[ \frac{\sin px}{\sin pl} \sin pct + \sum_{n=1}^{\infty} \frac{2pl \cos n\pi}{n^2 \pi^2 - p^2 l^2} \sin \frac{n\pi x}{l} \sin \frac{n\pi ct}{l} \right].$$

Also determine the transverse force which produces the given obligatory motion.

6. Three elastic strings  $AB, BC, CD$  of different materials are attached to each other at  $B$  and  $C$  and stretched in a straight line between two fixed points  $A$  and  $D$ . If the particles of the strings receive longitudinal displacement, obtain the equation giving the period of a principal oscillation.

If  $m_1 a_1 = m_2 a_2 = m_3 a_3$  where  $m$ 's are the linear densities and  $a$ 's are the velocities of longitudinal waves along the strings, find the periods.

7. A body has a point  $O$  fixed in space and moves about  $O$  under gravity. Discuss the motion, given that the moments of inertia about the principal axis at  $O$  are  $A, B, C$ , ( $A > B > C$ ) and the centre of gravity  $G$  lies in the principal plane perpendicular to  $OB$ , the moment of inertia about  $OG$  being  $AC/B$ .

Discuss the dynamical and kinematical significance of the resulting integrals and find in particular the motion when the angular momentum about the vertical is zero.

8. A uniform heavy rod, suspended from a fixed point by a string makes small oscillations about the vertical. Determine the motion.

A uniform rod, moveable about one extremity, moves in such a manner as to make always the same angle  $\alpha$  with the vertical; show that the time of a small oscillation is

$$2\pi \sqrt{\frac{2a}{3g} \cdot 1 + 3 \cos^2 \alpha}$$

where  $a$  is the length of the rod.

9. A system with  $n$  degrees of freedom is performing free oscillations about its position equilibrium. Investigate the effect of introducing one or more constraints on the periods.

Two independent systems whose principal co-ordinates are respectively  $(\theta, \phi)$  and  $(\xi, \eta)$  vibrate in different periods. If they are connected by introducing a geometrical relation which may be represented by

$$a\theta + b\phi + a\xi + b\eta = 0;$$

show that the periods of connected system are given by

$$\frac{a^2}{p_1^2 - p_1'^2} + \frac{b^2}{p_2^2 - p_2'^2} + \frac{a^2}{p_3^2 - p_3'^2} + \frac{b^2}{p_4^2 - p_4'^2} = 0,$$

where  $(p_1, p_2), (p_3, p_4)$  are the values of  $p$  for the two disconnected systems.

## SEVENTH PAPER

## (TIDES AND SURFACE WAVES—FIRST PAPER)

*The questions are of equal value**Attempt six questions only*

1. Explain the term *long waves* and point out its dynamical and kinematical peculiarities. Prove that in a uniform canal of depth  $h$  they are transmitted with the velocity  $(gh)^{\frac{1}{2}}$ .

A straight uniform canal of breadth  $b_1$  is constricted from a point to the uniform breadth  $b_2$ , the depth remaining unchanged. If a train of long waves pass along the former canal to the latter, prove that the elevations of the incident and transmitted waves are in the ratio

$$\frac{b_1 + b_2}{2b_1}.$$

2. The potential of the disturbing effect of the Moon as

$$\Omega = \frac{3}{2} \frac{\gamma M a^4}{D^3} \left( \frac{1}{3} - \cos^2 \theta \right)$$

where  $M$  is the mass of the Moon,  $D$  its distance from the Earth,  $a$  the radius of the Earth, and  $\theta$  the Moon's zenith distance at a point on the Earth's surface. The Moon being supposed to move in the plane of the equator, prove that for an equatorial canal of finite length, the maximum elevation at the middle point is

$$\frac{1}{2} \left( 1 - \frac{\sin 2\alpha}{2\alpha} \right)$$

times the equilibrium height when  $2\alpha$  is the angle subtended by the canal at the centre of the Earth.

3. Investigate the secular stability of a system rotating about an axis in relative equilibrium and prove that in the presence of frictional forces there is stability only if  $V - T_0$  is a minimum,  $V$  being the Potential energy and  $T_0$  the Kinetic energy of the system without relative motion.

Indicate briefly the applications of the theory to the problem of tides on a rotating sheet of water.

4. Investigate, after Laplace, the theory of tides on a rotating globe and deduce the equations of oscillation in the form

$$\frac{\partial}{\partial \mu} \left( \frac{1 - \mu^2}{f^2 - \mu^2} \frac{\partial (\zeta - \bar{\zeta})}{\partial \mu} \right) + \beta \zeta = 0,$$

where  $\beta = 4\omega^2 a^3 / gh$ ,  $f = \sigma / 2\omega$ ,  $\bar{\zeta}$  the equilibrium height.

5. What are the three main types of lunar tides? Show how to infer them from the expression of the equilibrium tidal height.

Show how to allow for the effect, on the tidal height, of the mutual attraction of the water-particles composing the tidal waves.

6. For a system of free waves travelling in any direction along a uniform canal prove that the potential energy is equal to the kinetic.

A canal extending from  $x=0$  to  $x=a$  has a constant depth but a breadth varying as  $x$ . At  $x=a$  it joins an open sea where a simple harmonic oscillation is maintained. Find the height of the oscillations in the canal.

7. Prove that under certain conditions the problem of forced oscillations in a non-rotating circular sea of constant depth may be solved.

Apply this method to the semi-diurnal tide for a polar sea assumed to be of constant depth and enclosed by a small circle of latitude.

8. Give a short formulation of the problem of tidal diffraction.

A system of waves  $\xi = e^{i(kx + \sigma t)}$  is diffracted by a small island at the origin. Find the diffracted system and indicate the limits within which the solution is valid.

9. Work out, after Airy, the effect of viscosity on tides in an equatorial canal and point out how this effect mainly consists in retardation or acceleration of the time of high water according as the tides are direct or inverted.

## EIGHTH PAPER

### (TIDES AND SURFACE WAVES—SECOND PAPER)

*The questions are of equal value*

*Try THREE questions only from the First Half and THREE more only from the Second Half*

#### FIRST HALF

1. Prove that the equations of motion

$$x = a + \frac{1}{k} e^{kz} \sin k(a + \sigma t),$$

$$z = c - \frac{1}{k} e^{kz} \cos k(a + \sigma t),$$

of a liquid particle represent a type of surface waves, provided  $\sigma^2 = \frac{g}{k}$  and the liquid be of infinite depth.

Show further that the motion is rotational and point out the direction of the vorticity.

2. An unlimited sheet of water of depth  $h$  is flowing with a velocity  $c$  ( $> \sqrt{gh}$ ) and there is a concentrated pressure  $P$  acting at a point ( $x=0$ ) on the surface. Express the elevation  $\zeta$  of the liquid in the form

$$\zeta = \frac{P}{\rho c^2} \sum_{s=0}^{\infty} B_s e^{-\beta_s \frac{x}{h}} \text{ for } x > 0.$$

What is the expression for  $x < 0$ ?

3. In a canal whose section consists of two straight lines inclined at  $60^\circ$  to the vertical prove that a type of oscillations may be produced, characterized by a velocity-potential of the form

$$\phi = H \left[ \cosh k(z-h) + \frac{\sigma^2}{gk} \sinh k(z-h) + 2 \cosh \frac{ky\sqrt{3}}{2} \left\{ \cosh k \left( \frac{z}{2} + h \right) - \frac{\sigma^2}{gk} \sinh k \left( \frac{z}{2} + h \right) \right\} \right] e^{i(kx + \sigma t)}.$$

Hence deduce the velocity-potential of wave-motion near a shore sloping at  $80^\circ$  to the horizontal and point out the existence of a nodal line.

4. A stick partly dipping in water is made to move over the surface with a velocity  $c$ . Find the equation of the Kelvin wave-patterns produced.

Prove further that no such wave-patterns would arise if

$$c < \sqrt[4]{\frac{4gT}{\rho}},$$

where  $T$  is the surface tension and  $\rho$  the density of water.

5. A spherical shell of liquid oscillates under gravity about a concentric solid nucleus. Find the frequency of the  $n$ th harmonic.

Find an expression for the potential energy of the motion and verify that it is a minimum in the state of equilibrium, provided the density of the liquid is less than that of the nucleus.

## SECOND HALF

1. Investigate the effect produced in the motion and the surface of a stream by slight inequalities in its bed. Find the form of the surface when there is an isolated inequality at a given point of the bed.

2. Two heavy liquids each unlimited in extent are in relative motion, one above the other, in a horizontal direction. Discuss the stability of the plane surface of separation. Consider also the case when the liquids are confined between two fixed horizontal planes.

3. Obtain expressions for the velocity components and surface elevation in the propagation of water waves in one horizontal direction, the viscosity of water and the gravitational and capillary forces being taken into account. Prove that when the depth is infinite the motion is approximately irrotational and determine the corresponding velocity potential.

4. Investigate the vibrations of a cylindrical jet of liquid of circular section.

5. A viscous liquid is confined between the planes  $z=0$  and  $z=h$  and the plane  $z=0$  is made to execute a simple harmonic motion in the direction of the  $x$ -axis. Determine the oscillations of the liquid and the retarding force per unit area on the oscillating plane. Discuss also the case when the liquid is unlimited in the positive direction of the  $z$ -axis.

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## SEVENTH PAPER

### (ADVANCED ASTRONOMY—FIRST PAPER)

*The questions are of equal value*

## FIRST HALF

N.B.—Answer THREE questions only

1. What is the principle of conformal representation of one surface upon another and how would you decide whether such a representation has been secured? Shew, with reference to two given surfaces, say, plane surfaces, that there is, for the requirements of conformal representation, an infinity of ways for determining the correspondences between the points of the surfaces.

How would you make a conformal map of a surface of revolution so that the parallels of latitudes and meridians correspond to the parallels to the co-ordinate axes? Apply your result to the case of a sphere, so as to obtain Mercator's Projection; shew, by a neat diagram, how the meridians, parallels of attitude, and loxodromes are projected.



2. Explain the phenomenon of atmospheric refraction. Taking account of the curvatures of atmospheric strata, derive a differential equation for refraction, which you are to transform to a suitable form for integration so as to obtain first two terms; shew that the first term may be had independently of any hypothesis with regard to the atmospheric density, and calculate the second term from that due to Newton.

3. What is the annual aberration of a fixed star? Calculate the effect of elliptic motion of the earth on its aberration. Shew when a star has a uniform rectilinear motion, its displacement by aberration depends entirely on the relative motions of the star and the observer.

Shew that, for every place there is always, at a given instant, one position for a star for which the aberration is entirely counteracted by the refraction. Shew also that at midnight on the shortest day, the zenith distance of this position is given by an equation of the form  $\sin^2 z + \lambda \sin z = 1$ . [The correction for refraction is to be assumed proportional to the tangent of the zenith distance and the earth's orbit, circular.]

4. If  $D$  be the apparent distance on a certain day between a star ( $\alpha, \delta$ ) and an adjacent star at the apparent position angle  $p$ , and if  $f, g, G, h, H, i$  be the corresponding independent day numbers for correcting the apparent place of stars for aberration, precession, and nutation, shew that the distance between the mean places of the two stars on the preceding January 1 was  $D + D[i \sin \delta - h \cos(H + \alpha) \cos \delta] \sin 1''$ , and the position angle was  $p - g \sin(G + \alpha) \sec \delta - h \sin(H + \alpha) \tan \delta$ .

To find the position angle at a date  $n$  years earlier than January 1 immediately preceding the observation, shew that a further correction of  $20'' \cdot 046 \sin \alpha \sec \delta$  must be applied to  $p$  to allow for the precessional motion of the pole.

5. What is meant by the term general precession of the mean equinox? The motion of the celestial pole is due to the action of the sun and the moon upon the equatorial protuberance of the earth.—Substantiate the above statement by a dynamical theory, indicating at the same time the theoretical relationship of nutation to precession.

Explain how you would use independent day numbers to determine the apparent co-ordinates of a star (devoid of proper motion) on any particular day when its mean co-ordinates for the year in which that day is contained are known. [The effects of precession and nutation are to be considered; and the nature of the independent day numbers is to be specified.]

## · SECOND HALF

N.B.—Attempt ANY THREE

6. Explain what you understand by 'measure of Precession.' Given two laws of error  $\phi(\epsilon)$  and  $\phi'(\epsilon)$ , deduce from your statement that  $\phi(\epsilon)$  will give a better result than  $\phi'(\epsilon)$ , if

$$\int_{-\infty}^{\infty} |\epsilon^m| \phi(\epsilon) d\epsilon < \int_{-\infty}^{\infty} |\epsilon^m| \phi'(\epsilon) d\epsilon; \quad m > 0.$$

(Assume that the curves  $\phi(\epsilon)$  and  $\phi'(\epsilon)$  intersect only once for positive values of  $\epsilon$ .)

$$\text{Taking } \phi(\epsilon) = \frac{h}{\sqrt{\pi}} e^{-h^2 \epsilon^2}$$

$$\phi'(\epsilon) = \frac{h'}{\sqrt{\pi}} e^{-h'^2 \epsilon^2},$$

show that the law  $\phi(\epsilon)$  is preferable to  $\phi'(\epsilon)$  if  $h > h'$ .

7. (i) At a certain date two stars came simultaneously to the horizon of a place in latitude  $\cot^{-1}(\sqrt{3} \sin \epsilon)$  at  $0^\circ$  sidereal time. At a later date when the precession had amounted to  $60^\circ$ , show the same star came simultaneously to the horizon of another place, whose latitude was

$$\epsilon + \cot^{-1}(2 \tan \epsilon),$$

at sidereal time  $6^h$ ,  $\epsilon$  being the obliquity of the ecliptic.

(ii) Show that a southern star of declination  $(-\delta)$  and right ascension  $\alpha$  must at some epoch have been visible from a station in north latitude  $\phi$ , provided that

$$\sin \delta \cos \epsilon + \cos(-\delta) \sin \epsilon \sin \alpha < \cos(\phi - \epsilon),$$

where  $\epsilon$  is the obliquity of the ecliptic.

8. A solar eclipse is to be observed from a given place on the surface of the earth; show how you will proceed to predict the time of commencement of the eclipse as seen from the place.

9. Give a rigorous mathematical theory of Halley's method of determining solar parallax.

Explain why Halley's method of determining solar parallax by the transit of Venus would not be equally applicable to the transit of Mercury. (Assume the synodic period of Mercury to be 116 days and that of Venus 584 days.)

10. In a horizontal sun-dial situated at Calcutta, show that the end of the shadow of the style during any day traces out a hyperbola.

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## EIGHTH PAPER

### (ADVANCED ASTRONOMY—SECOND PAPER)

*The questions are of equal value*

#### FIRST HALF

N.B.—Attempt ANY THREE

1. Can a total solar eclipse observed from any place of the earth appear to be annular from any other place?

Explain clearly how a curve on the earth's surface may be traced, from every point of which an annular solar eclipse may appear to be central.

2. Explain Sumner's method of determining the position of a ship at sea.

The sun's declination being  $15^\circ$  N and the chronometer indicating  $2^h 0^m$  Greenwich mean time, and the sun's observed zenith distance being  $45^\circ$ , prove that the equation of the corresponding Sumner's line on the map formed by stereographic projection from the south pole on the plane parallel to the equator (in polar co-ordinates referred to the north pole as pole and the meridian of Greenwich as initial line) is

$$r^2 - 2cr(\theta - 30^\circ) + c^2(2\sqrt{3} - 3) = 0.$$

The equation of time is neglected, and  $c$  is a constant depending on the scale of the map.

3. Explain, as fully as you can, the method of determining longitude by moon culminations.

If  $d$  be the geocentric distance between moon and sun,  $d_1$  the distance as altered by parallax,  $\delta$  moon's geocentric declination,  $\Delta$  sun's declination,  $\phi$  the latitude of the observer, prove that

$$d - d_1 = A \pi \sin \phi \left( \frac{\sin \Delta}{\sin d_1} - \frac{\sin \delta}{\tan d_1} \right).$$

4. Show that on the 1st of April there are two places on the surface of the Earth which have the same duration of daylight (daylight including the periods of twilight).

5. Prove that the equation to the centre is given in terms of the true anomaly  $v$  by the expression

$$\sum_{r=1}^{\infty} (-1)^{r-1} \frac{2\lambda^r \{(p+1) - (p-1)\lambda^2\}}{p(1+\lambda^2)} \cdot \sin pv,$$

where  $\lambda = e/(1 + \sqrt{1-e^2})$ ,  $e$  being the eccentricity of the orbit.

## SECOND HALF

Only THREE questions are to be attempted

1. The R.A. of the node of the galactic plane on the equator is  $\Omega$ , and  $i$  its inclination to the equator.  $\xi, \eta, \zeta$  are the components of velocity (in kms. per second) of a star  $\alpha, \delta$  referred to galactic rectangular axes, the direction of the  $\xi$ -axis being given by the node  $N$ .

If  $\mu_\alpha, \mu_\delta$  are the components of proper motion in seconds of time and seconds of arc respectively, show that

$$\xi \sin (\alpha - \Omega) - \eta \cos i \cos (\alpha - \Omega) + \zeta \sin i \cos (\alpha - \Omega) = -\frac{K}{\Pi} \mu_\alpha \cos \delta,$$

where  $K$  is a certain constant and  $\Pi$  the annual parallax of the star.

Derive the corresponding equation in  $\mu_\delta$ .

2. The pole of the Milky Way is at R.A. 12h. 48m., Dec.  $+27^\circ$ . About what dates will the sun pass through the Milky Way? (Obliquity of the ecliptic  $= 23^\circ 27'$ .)

3. *Either,*

Prove that the value of  $\mu$  on the spheroidal series in the tidal problem is given by

$$\frac{\mu}{\pi \rho} = \frac{1-e^2}{e^2} \log \left( \frac{1+e}{1-e} \right) - \frac{6(1-e^2)}{e^2(3-e^2)}.$$

*Or,*

Explain the Theory of the Tidal Evolution of the Earth-Moon system.

4. *Either,*

State and explain Laplace's Nebular Hypothesis. Discuss its merits and demerits.

*Or,*

Explain what you understand by linear series and draw a diagram to represent the different kinds of Equilibrium configurations. Prove that the points of bifurcation are all determined by the single condition

$$\Delta = 0,$$

where  $\Delta$  is the Hessian of the Potential Energy Function with respect to the co-ordinates.

5.

*Either,*

What will be the form of the primary of a double star, the secondary of which is a rigid sphere? Justify your statement by a short mathematical explanation.

Deduce as a special case the form of a single fluid mass rotating under its own gravitational attraction.

*Or,*

State and explain the Planetesimal Hypothesis of Moulton and Chamberlian.

## PHYSICS

## INTERNAL EXAMINERS

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## EXTERNAL EXAMINERS

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,, SATYENDRANATH BOSE, M.Sc.

## FIRST PAPER

*The questions are of equal value**Attempt ANY SIX questions*

1. Give the theory of the spherical pendulum, and show how it has been used to determine the rotation of the earth.

2. Apply the Hamilton-Jacobi equation to the solution of the problem of the motion of a material particle under the action of central forces.
3. Show how any displacement of a rigid body can be represented as due to a rotation about an axis and a translation parallel to it.
4. Establish the characteristics of (i) dilatational, and (ii) rotational waves propagated in a given direction, and illustrate each type of wave by an example.
5. Discuss fully the characteristics of the normal curve of errors, and compare the same with Maxwell's law of distribution of velocities in the molecular theory of gases. Explain how you would test the significance of the difference between two mean values.
6. Explain the principles on which the production of very low pressures is based with special reference to either (a) the Gaede molecular pump, or (b) the mercury diffusion pump.
7. Give a critical discussion of the different methods by which the diameter of a gas molecule can be determined, and discuss the limitations in each case.
8. Explain after Einstein the Brownian motion of a particle in a fluid, and briefly discuss Perrin's experiments in this connexion.
9. Write short notes on: (a) phase space, (b) Boltzmann's H-function, and (c) thermodynamical probability, with special reference to the entropy of a system.
10. Compare and contrast the Bose-Einstein and the Fermi-Dirac statistics.

## SECOND PAPER

*The questions are of equal value*

*Attempt ANY SIX questions*

1. Describe Clement and Desormes's method for finding the ratio of the specific heats of a gas. Discuss the relevant equations and the corrections suggested by Poynting and Thomson.
2. Describe Lee's method of determining the conductivity of very poor conductors, and discuss the order of accuracy which may be attained in this method.
3. Discuss the use of air as a standard substance for the measurement of absolute temperatures.
4. Explain briefly the principle of equipartition of energy, and show how it can be used to deduce the specific heats of monatomic and diatomic gases. How far have the theoretical results been confirmed by experimental observations?
5. Explain the law of mass action, giving concrete examples. Show how this law can be deduced from the laws of thermodynamics.
6. Describe the Otto and the Diesel cycles as applied to internal combustion engines. Determine the efficiency of the engine in *any one* case.
7. Deduce the Saha ionization formula, and indicate some of its applications.
8. Write a full note on the concave grating.
9. Calculate the deviation of a ray traversing a prism in a plane other than the principal plane, and hence account for the curvature of the spectral lines in a large prism spectroscope.
10. Give briefly Abbe's theory of microscopic vision. What is meant by the resolving power of a microscope, and what is its relation to magnifying power?

Justify the statement that the limit of resolution of a microscope is attained when the total magnification is about 900.

## THIRD PAPER

*The questions are of equal value**Attempt ANY SIX questions*

1. Investigate the force on a dielectric sphere (of specific inductive capacity  $k$ ) placed in an electric field. Indicate how the specific inductive capacity of a substance may be experimentally determined by measuring the force on a dielectric.

2. Give a critical account of various methods of measuring resistance in absolute units, and discuss their relative accuracy.

3. Explain the classical theory of the effect of temperature on the magnetic properties of substances. Discuss experimental results with special reference to Curie's work.

4. Discuss the conditions necessary for maintaining an oscillatory discharge, and explain clearly how the energy is supplied.

An alternating current flows through a non-inductive circuit of resistance  $R$ . Calculate the drop of voltage in the circuit when a capacity  $C$  is placed in parallel with  $R$ . If  $R=30,000$  ohms and  $C=800,000$  e.s.u., find for what frequency the reduction is five per cent.

5. Write a full note on Maxwell's theory of the electromagnetic field, with special reference to experimental observations which rendered necessary later modifications in the theory.

6. Show that the light reflected from a metallic surface is always elliptically polarized. Explain briefly how the elliptic nature of polarization of the reflected light may be investigated experimentally.

7. Investigate the refraction of a plane electromagnetic wave at the boundary of two different dielectric media, and find the relative intensities of the incident and refracted beams.

8. Give a general account of the theory of dispersion, and investigate the relation between the refractive index and the density of a gas.

9. Discuss the propagation of an electromagnetic disturbance in a crystalline medium.

10. Explain what is meant by amplification factor, mutual conductance, and anode resistance of a triode valve.

Prove that if a resistance  $R$  be introduced in the anode circuit of a valve the amplification produced is given by

$$\frac{\mu R}{R + \frac{1}{a}},$$

where  $\mu$  is the amplification factor and  $a$  the anode conductance of the valve.

## FOURTH PAPER

*The questions are of equal value**Answer ANY SIX questions*

1. Deduce from Maxwell's equations the expression for the magnetic field due to a moving electron.

An electron is travelling with a speed of  $10^8$  cm. per second. Determine the magnetic field produced by the electron at a distance  $10^{-7}$  cm. from the centre of the electron and in a direction from the centre of the electron at right angles with the motion of the electron. (Charge of an electron is  $-4.77 \times 10^{-10}$  e.s.u.)

2. Give a sketch of the electron theory of paramagnetism, with special reference to the influence of temperature on susceptibility.

3. What is meant by thermionic work function?

Deduce Richardson's equation for thermionic current from unit area from a hot body

$$i = AT^{\frac{1}{2}} \exp \left( -\frac{B}{T} \right).$$

4. The proton is concentrated in a small region of space less than  $10^{-12}$  cm. in diameter. Discuss the experimental evidence in support of the above statement.

5. Explain how atomic masses are accurately determined with Aston's mass-spectrograph. In what way are such determinations significant?

6. Write a note on the artificial disintegration of elements.

7. Contrast the mechanism of the excitation of optical spectra (of hydrogenic atoms) with that of X-Ray spectra.

Hence explain the significance of Moseley's Law in X-ray.

8. Discuss Heisenberg's principle of indeterminacy.

If we know that at a particular instant an electron has a speed somewhere between 20 and 21 volts, what is the uncertainty in our knowledge about the location of the electron at that time? (Speed of 1 volt electron =  $5.94 \times 10^7$  cm. per second;  $h = 6.55 \times 10^{-27}$ .)

9. Discuss the nature of the  $\psi$ -waves which are imagined to be associated with material particles.

What interpretation do you put to the intensity of the  $\psi$ -waves? Describe experiments in support of your answer.

10. Write an essay developing the following subject :—

Thermodynamics of radiation leading to Planck's law of black-body radiation and formulation of the quantum hypothesis.

## FIFTH PAPER

### (GROUP A—THEORY OF RELATIVITY)

*The questions are of equal value*

*Attempt ANY FIVE questions*

1. Give a general account of the experimental foundations of the special theory of relativity.

2. Investigate the effect of the motion of a medium on the velocity of light and discuss relevant experimental results.

3. Discuss the Lorentz transformation, with special reference to the electromagnetic field equations, and investigate the flow of energy in a moving medium.

4. Discuss the curvature of the space-time continuum, with special reference to the law of gravitation.

5. Give a critical account of the observational evidence in favour of the gravitational theory of relativity.

6. Discuss the permanence of the material energy tensor and its bearing on the law of gravitation.

7. Investigate fully the motion of a charged particle.

8. Give a brief account of Kaluza's theory of five-dimensional geodesics.

9. Write an essay on *any one* of the following topics :—

- (a) The Expanding Universe.
- (b) The Action Principle in the Theory of Relativity.
- (c) Unified Field Theory.

### (GROUP B—SPECTROSCOPY)

*Only five questions are to be attempted*

1. Give an account of the Paschen-Back effect from the standpoint of the quantum theory.

2. Calculate the spectral terms of (a) neutral, and (b) singly ionized aluminium for the first three electron configurations.

What other elements present spectra similar to those of (b)?

3. Give an account of different types of collisions, and discuss experimental results, with special reference to collisions of the second kind.

4. What are electronic bands? Account for the various branches in which these branches resolve themselves.

5. Give a description of the spectrum of molecular iodine.

How can the heat of dissociation of iodine be determined from a study of the spectrum?

6. How are the intensities of spectral lines measured?

What are the relative intensities of the lines of the quintet  $p-d$  multiplet?

7. Explain how the existence of isotopes can be inferred from a study of the hyperfine structure of band spectra.

State and explain the various principles of selection as applied to spectroscopy.

Under what circumstances are these principles violated?

9. Give an account of the Stark effect, and describe an experimental arrangement for observing it in the laboratory.

Indicate briefly how the effect is explained by the quantum theory of atomic spectra.

### (GROUP C—ELECTRICAL OSCILLATIONS AND WIRELESS)

*The questions are of equal value*

*Only five questions are to be attempted*

1. Discuss why an ordinary LC circuit responds only to a single frequency, whereas an aerial circuit responds to many frequencies.

What are natural frequencies of (i) a horizontal aerial placed high above the surface of the earth, and (ii) a vertical aerial with one end earthed? Illustrate your answer by suitable diagrams.

2. Deduce an expression for the field strength at any point over a flat conducting earth due to radiation from a vertical earthed aerial.

How is the formula modified to suit the case of the curved earth?



8. What do you mean by 'side-band' in radio telephony?

Sketch the diagram of a circuit for suppressing one of the side-bands. Hence explain side-band telephony and its advantages over ordinary (radio) telephony.

4. Describe the action of antennae arrays in short wave directive transmitters.

5. Draw a neat diagram, indicating the main features of a modern high power radio telephony station.

What methods are generally adopted for ensuring constancy of frequency?

6. Explain clearly how the current in a diode is controlled by the space charge surrounding the filament.

Draw diagrams to show the distribution of voltage and electron density between a plane hot cathode and a parallel anode. How is the voltage distribution modified when a grid is interposed between the cathode and the anode?

7. Prove that a space containing  $N$  ions per unit volume has an effective dielectric constant equal to

$$1 - \frac{4\pi N e^2}{\omega^2 m}$$

where  $e$  and  $m$  are the electronic charge and mass and  $\omega$  the angular frequency of the incident wave.

Hence discuss the rôle of the ionized upper atmosphere in carrying radio waves round the curved surface of the earth.

8. Draw the circuit diagram of a modern superheterodyne receiver for medium wavelength, indicating the approximate values of the components used. Explain how the set functions.

9. Explain the principle of rectification by utilizing the curved current-voltage characteristic of certain substances.

Contrast the following methods of detection by a triode valve :—

- (a) Anode bend rectification.
- (b) Heterodyne method.
- (c) Cumulative grid rectification.

### (GROUP D—X-RAY AND CRYSTAL STRUCTURE)

*The questions are of equal value*

*Answer ANY FIVE questions*

1. Sketch Compton's theory of Scattering by free electrons. Deduce the formula (a) for the change of wavelength on scattering, (b) for the velocity of the recoil electrons.

Discuss the importance of this discovery in modern physics.

In what respects does it differ from Raman effect?

2. (a) Deduce the correction factor in Bragg's law of reflection due to X-ray refraction in a crystal. Describe any recent experiment for determining the refractive index of X-rays.

(b) Discuss the applicability of Lorentz's dispersion formula in the X-ray region, and clearly state its significance in the determination of the values of the refractive index.

3. What are 'regular' and 'irregular' doublets in X-rays? Give Sommerfeld's explanation of these doublets. Explain fully why the regular doublets can be termed spin doublets.

4. What are primary and secondary absorption edges? Discuss Kronig's theory to explain the origin of these edges.

5. How are photo-electrons ejected by X-rays? Discuss any theory to explain the spatial distribution of photo-electrons ejected by X-rays or  $\gamma$ -rays from a substance.

6. What is Pauli's Exclusion Principle? Show how the distribution of electrons in the different X-ray levels and sub-levels can be obtained with its help.

7. Explain how you would determine the crystal structure of any substance which is not of cubic form.

8. You are supplied with a powder of cubic form. How would you proceed to determine the exact nature of the substance, i.e., whether it belongs to body-centred, face-centred or pure cubic form? Give reasons for your answer.

9. Write an essay on X-ray diffraction in liquids, reviewing the theories and indicating the general conclusions as to the atomic or molecular arrangements in the liquids.

#### (GROUP E—DISPERSION AND SCATTERING OF LIGHT)

*The questions are of equal value*

*ANY FIVE questions will carry full marks*

1. Give a general account of interferometric methods of determining the refractivity of gases and discuss in detail the application of the Fabry-Perot etalon for the purpose.

2. Derive the Lorentz formula for the refractivity of a dense fluid. Explain to what extent it agrees with or deviates from the experimental results, and indicate how it has been proposed to explain the observed deviations.

3. What is anomalous dispersion, and in what circumstances can it be observed? Explain the phenomenon on the basis of the electron theory deriving the formulæ necessary for the purpose.

4. Deduce the Einstein-Smoluchowski formula for the scattering of light in a fluid, and deduce Rayleigh's formula for scattering from it.

5. What information can one gather regarding the structure of a molecule by an examination of the polarization of the scattered radiation? Illustrate your answer by taking the case of a simple diatomic gas.

6. Give J. J. Thomson's theory of X-ray scattering, and deduce an expression for the energy of X-rays scattered by light elements. How far does the classical theory accord with experimental results?

7. Sketch an apparatus for photographing the Raman Spectra of gases. Describe the results obtained with hydrogen gas, and discuss the theoretical significance of the results obtained with this substance.

8. Write an essay on the Raman effect as applied to the problems of chemistry.

## APPLIED PHYSICS

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## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions to be attempted*

1. Discuss the working principle of expansion type single sag hot-wire ammeter.

The working wire of a single sag type hot-wire instrument is 15 cms. long and the material of which it is constructed has a linear coefficient of expansion of  $16 \times 10^{-6}$ . If the change of length of this wire with a temperature increase of  $85^\circ$  is taken up by a silk thread attached to its centre, determine the magnification of expansion, assuming no initial sag of the working wire. Determine also the magnification if the initial sag of the working wire be 0.1 cm. under similar conditions.

2. Discuss the principle and the merits of different methods of measuring resistance in absolute units and describe fully one of them.

Work out the dimensions of resistance in electromagnetic system of units.

3. Discuss the working principle of a single-phase electro-dynamometer type power-factor meter.

4. Show how to deduce the mean spherical candle-power of an electric lamp from the polar curve of its light distribution.

5. Discuss the principle of minimum generation of heat in a net work of conductors.

A wire forms a regular hexagon and the angular points are joined to the centre by wires each of which has a resistance  $\frac{1}{n}$  of the resistance of a side of the hexagon. Show that the resistance to a current entering at one angular point of the hexagon and leaving it by the opposite point is

$$\frac{2(n+3)}{(n+1)(n+4)}$$

times the resistance of a side of the hexagon.

## SECOND HALF

*Only THREE questions are to be attempted*

1. In a multipolar D.C. motor, deduce an expression for torque in terms of the following :—

- (a) Armature ampere conductors.
- (b) Flux per pole.
- (c) Number of poles.

A 2-pole, shunt-wound motor has an armature resistance of 0.05 ohm and 60 armature conductors. The armature torque is 80 lbs. ins. when the applied P.D. is 100 volts and the flux per pole is 5 megalines. Calculate the armature current and the speed of the machine.

2. Explain the meaning of electrical symmetry in direct current armatures.

What are the factors controlling it? How is the performance of a machine affected by lack of symmetry?

A generator is to give 350 KW. at 500 volts when running at 200 revolutions per minute. There are to be 8 poles each with a flux of about 10 megalines. Find a suitable armature winding given that the current per path should be between 150 and 300 amperes.

3. Differentiate between compensating windings and commutating pole windings in continuous current machines.

To what classes of machines are these windings particularly suited, and for what reasons?

Explain why sparking is liable to occur at the brushes of a D.C. machine, and describe briefly the methods employed in practice to diminish this tendency.

4. A generator has to supply two consumers A and B who require 200 amperes and 100 amperes respectively. Main cables are used to carry the power to a point C which is one kilometer from the generator. A and B are respectively 0.5 and 0.3 kilometer from C. If the voltage drop in the system be 80 volts, determine the cross-sectional area of the cables so that the total volume of copper may be a minimum. Assume specific resistance of copper to be  $1.66 \times 10^{-6}$  ohm per cm. cube.

5. Draw a neat schematic diagram of the layout of a three-wire D.C. supply substation, showing the necessary protective gear and instruments.

## SECOND PAPER

*The questions are of equal value**Only THREE questions need be attempted from EACH half*

## FIRST HALF

1. Derive the expression for the loss of charge of a condenser when it is left for some time after its charging from a source of constant e.m.f.

A condenser of capacity  $c$  (farads) is being charged by a constant P.D. of  $V$  volts through a resistance of  $R$  ohms. Show that the time taken for the P.D. at the condenser terminals to change from  $V_1$  to  $V_2$  volts is given by

$$t = cR \cdot \log_e \frac{V - V_1}{V - V_2} \text{ (Seconds).}$$

2. One branch of a parallel circuit contains an inductive coil and the other branch contains an inductive coil in series with which is connected an adjustable non-inductive resistance and a condenser of adjustable capacity. A sinusoidal E.M.F. of constant frequency is impressed on the parallel circuit. Determine the values of the capacity and the resistance such that the currents are equal in magnitude but have a phase difference of  $90^\circ$  with respect to each other.

If the inductive coils in the parallel circuits have a resistance of 10 ohms and inductances of 0.2 henry and line has a  $\omega$  value of 314, find the value of the capacity in microfarads and the value of the adjustable resistance in ohms.

3. An e.m.f. of

$$e = 2000 \sin \omega t + 400 \sin 3\omega t + 100 \sin 5\omega t$$

is impressed upon a circuit of resistance 10 ohms and a variable inductance and a condenser of 80 microfarads arranged in series with a hot-wire ammeter. Find the value of the inductance which will give resonance with the triple frequency component of the pressure and determine the reading on the ammeter when such a resonance occurs. Assume  $\omega = 300$ .

4. The load on a certain plant consists of 1,200-H.P. 2,200-volt three-phase induction motors operating on an average efficiency of 87% and average power factor of 0.8 (lagging).

Determine the K.V.A. rating and the power factor of a synchronous motor of 90% efficiency which will replace 250 H.P. of the above load and correct the power factor to unity.

5. Derive an expression for the power lost in unit time per unit volume in thin sheets of metal forming the core of a transformer due to eddy currents.

Find the amount of watts lost per second in the core of a transformer formed of iron sheets 0.5 m/m in thickness and 50 kilograms in weight working at a maximum induction density of 10,000 on a circuit of 50 cycle. The density of iron is 7.8 and its specific conductivity is  $10^6$  mhos.

## SECOND HALF

1. How do you parallel and distribute load on an incoming alternator?

Two identical 2,000 K.V.A. alternators operate in parallel. The governor of the first machine is such that the frequency drops from 50 cycles to 48 on full load. The corresponding speed drop of the second machine is 50 to 47.5 cycles. How will the two machines share a total load of 8,000 K.W.? What is the max. load at unity power factor that can be delivered without overheating either machine?

2. A 40-K.V.A. 2,000-volt transformer took 600 watts with the secondary on open circuit giving an e.m.f. of 115 volts. With the secondary short circuited the primary took 20 amperes at 60 volts and used 800 watts.

Find the regulation and efficiency at full load with a power factor of 0.8. Determine the load which gives the maximum efficiency at the unity power factor and the value of the efficiency.

3. The following test results are obtained for a 3-phase star-connected 5-H.P. 50-cycle 4-polar motor :—

No-load volts	...	190		
current	...	5 amps.		
watt	...	330		
Standstill volt	...	50,	70,	104
current	...	12	16	28
watt	...	510	970	2,200.

Draw its circle diagram and find out the full load current, power factor, torque slip, efficiency. Its mechanical efficiency is assumed to be 85 per cent. Stator copper loss at standstill is 85% of the total loss.

4. A six phase rotary is to supply 1,000 amps. at 500 volts D.C. from 6,600 volt 3 phase mains. If the  $\Delta$  connected primary has 400 turns, explain the different methods of connecting the secondaries and find out the number of turns and currents for each of the methods. All losses are neglected.

5. Compare the methods of improving the power factors of a big consumer by (a) Static Condenser, (b) Synchronous Condenser.

A 2,200-volt 50 cycle three-phase motor has a full load of 250 K.V.A. at a lagging power factor of 0.6. Calculate the capacity of static condenser which will raise the power factor to 0.9 at full load, and determine the power factor at 75% full load, assuming the load power factor is still 0.6. Assume the losses of the condenser to be negligible.

### THIRD PAPER

*The questions are of equal value*

#### FIRST HALF

*Only THREE questions are to be attempted*

1. Give an account of the investigations in the specific heats of elements at low temperatures.

Deduce either Einstein's or Debye's expression for specific heat.

2. State and derive the first latent heat equation.

The melting point of pure acetic acid is  $16.6^{\circ}\text{C}.$ , and this is raised by  $0.0244^{\circ}$  per atmosphere increase of pressure. It occupies  $0.000790$  litres in the solid state, and  $0.000960$  litres in the liquid state at its melting point. Calculate the latent heat of fusion in work units (litre atmosphere) per gramme.

3. Investigate the propagation of temperature waves in a conducting medium due to simple harmonic variation of temperature at the surface. Obtain the expression for wave-velocity and wavelength.

The internal and external surfaces of a long hollow cylindrical tube of thickness,  $t$ , and of radius,  $r$ , are kept at temperatures  $\theta_1$  and  $\theta_2$ . Show that the quantity of heat,  $Q$ , which flows per second across a length,  $l$ , of the cylinder will be approximately given by

$$Q = 2\pi kl(\theta_1 - \theta_2) \cdot \frac{r}{t}$$

4. Deduce Maxwell's Four Thermodynamic Relations, and show that

$$C_p - C_v = \frac{9\alpha^2 v}{k} T,$$

where  $\alpha$  is the linear coefficient of expansion of a solid and  $k$  is its compressibility. What is the significance of the above relation?

5. Write a short note on Phase Rule and its usefulness in determining physical and chemical equilibrium.

Establish the equation

$$P + f = n + 2,$$

and explain the terms used in this connection.

## SECOND HALF

THREE questions carry full marks

Not more than two questions are to be attempted from EACH group

### GROUP A

1. Obtain an expression for the stress set up at a given distance from the neutral axis of a beam which is subjected to a bending moment  $M$  and the moment of inertia of whose section is  $I$ .

If the elastic limit is not exceeded, find the stress induced in a strip of spring steel  $\frac{1}{16}$ " thick by bending it round a drum 2 feet 6 inches in diameter. ( $E = 13,500$  tons per sq. inch.)

2. A rolled steel joist 10 inches deep has flanges 6 inches wide and  $\frac{3}{4}$  inch thick.

Find approximately the stress produced in it by a load of 15 tons uniformly spread over a span of 14 feet.

3. Prove Clapeyron's theorem of three moments.

A beam which is 8 feet long is simply supported at its ends. There is also another support at a distance of 3 feet from one end. If the weight of the beam be 10 lb. to the foot, calculate the bending moment at the middle support.

4. Compare the buckling loads (by Euler's theory) for a long column according as one or both the ends are free.

One end of a solid circular wooden post is firmly buried in the ground. Its diameter is 6 inches and length 8 feet. Find the greatest vertical load it will bear if  $E = 900$  tons per sq. inch, the other end is assumed to be free.

5. Establish the equations

$$\frac{q}{r} = \frac{T}{J} = \frac{C\theta}{l}$$

for the torsion of a circular shaft.

The propeller shaft of a steamship has to transmit 10,000 H.P. at 240 revolutions per minute. The shaft has an internal diameter of 6". Calculate the minimum permissible external diameter if the shear stress is not to exceed 10 tons per sq. inch.

### GROUP B

1. Find an expression for the mean free path of a system of gas molecules. State clearly how one can experimentally determine it.

2. Deduce Van der Waal's equation of state, explaining clearly the significance of its terms.

3. Explain clearly the principle of Molecular Pump. Why is it necessary to have an auxiliary pump to attain high vacuum quickly?

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Steam tables are allowed**Only THREE questions are to be attempted*

1. An air engine works on the following cycle :—

Compression takes place adiabatically from  $P_1V_1T_1$  to  $P_2V_2T_2$ . Heat is then added at constant volume  $V_2$ , and the pressure and temperature rise to  $P_3$  and  $T_3$ . Further heat is added at constant pressure  $P_3$ , and the volume increases to  $V_3$  and the temperature to  $T_4$ . Adiabatic expansion follows to the original volume  $V_1$ , pressure  $P_4$  and temperature  $T_5$  and heat is finally rejected at constant volume between  $P_4$  and  $P_1$ .

Neglecting variation of specific heat, show that the efficiency is given by

$$-\frac{1}{r^{\gamma-1}} \left[ \frac{a\rho^{\gamma}-1}{(a-1)+\gamma a(\rho-1)} \right],$$

where  $r = \frac{V_1}{V_2}$ ,  $\rho = \frac{V_3}{V_2}$ ,  $a = \frac{P_3}{P_2}$ , and  $\gamma = \frac{K_p}{K_v}$ .

Also show that this expression is a general form equally applicable to the Otto cycle and the Diesel cycle.

2. Steam at 200 lb./in.<sup>2</sup> abs. and superheated 80°C. is adiabatically expanded to 4 lb./in.<sup>2</sup> abs.

Calculate, with the aid of steam tables only, the pressure at which the steam is just dry, and the quality at the lower pressure.

If the steam is supplied to an engine working between these pressure limits, calculate the probable steam consumption in lb./H.P. hour, when the efficiency ratio, referred to the Rankine cycle, is 0.50. Take  $K_p = 0.567$ .

3. In the 'steam cooling' system applied to internal combustion engines the water in the jacket is allowed to boil, the steam formed is led to a condenser, and the condensate is returned to the jacket.

A petrol engine tested with two different methods of cooling gives a brake thermal efficiency of 25 per cent. and develops 40 B. H. P. Find the rates of circulation of water in the two cases :—

(a) Steam cooling : the jacket water boils at 104.1°C., and the condensate returns to the jacket at 93°C.

(b) Water cooling : the jacket water has a rise in temperature of 14°C.

In both cases, 28 per cent. of the heat supplied to the engine passes to the jacket.

4. Describe in detail how you would test a boiler to find :—

(a) the thermal efficiency of the boiler.

(b) The efficiency of the grate

(c) The efficiency of the heating surface.

In a boiler trial the following observations were made :—

Duration of trial—2 hours.

Weight of water evaporated during trial—2,500 lbs.

Average temperature of feed-water—72°F.

Average boiler pressure—48 lbs. per sq. inch (gauge).

Temperature—295°F.

Latent heat—915 B.Th.U. per lb.



Grate area—9 sq. feet.

Area of heating surface—267 sq. ft.

Total weight of coal used—440 lbs.

Total weight of ash—68 lbs.

Calorific value of coal—11,000 B.Th.U. per lb.

Calorific value of ash—5,000 B.Th.U. per lb.

To determine the dryness fraction of the steam the following observations were made with a Carpenter Calorimeter :—

(a) Time taken to collect  $\frac{1}{2}$  lb. of water in calorimeter—15 minutes.

(b) Weight of dry steam passing through calorimeter in 10 minutes—3.8 lbs.

Find also the equivalent evaporation from and at 212°F. per lb. of coal.

5. The following particulars were obtained from the test of a four-stroke cycle oil engine :—

Duration of trial—1½ hours.

Revolutions per min. 340.

Load on brake—96 lbs.

Spring balance reading—6 lbs.

Effective circumference of brake drum—136 inches.

Diameter of cylinder—7 inches.

Length of stroke—13.5 inches.

Weight of oil supplied—9.5 lbs.

Weight of circulating water—1,600 lbs.

Rise of temperature of circulating water—15°F.

Mean effective pressure from indicator diagram—88 lbs. per sq. inch.

Calorific value of oil—19,500 B. Th. U. per lb.

Determine :—

(a) B.H.P.

(b) I.H.P.

(c) Mechanical efficiency.

(d) Thermal efficiency.

(e) Heat carried away by circulating water.

## SECOND HALF

*Attempt THREE questions only*

1. Describe the various types of coupling used in transferring high frequency electrical energy from one circuit to another. What are the harmful effects of tight coupling ?

2. Write short notes on the following methods of generating high frequency for wireless :—

(a) Spark,

(b) Arc,

(c) Alternator,

(d) Static frequency changer.

3. Draw the circuit diagram of a choke control telephone transmitter, indicating the method of obtaining H.T. and L.T. when the source of power is an alternator of commercial frequency.

Assuming that the total input power on the transmitter is 10 K. W., allocate to the different parts of the gear the power each would require, and give an estimate of the aerial power under average condition.

4. Discuss the output and efficiency of valve-maintained H.F. generator.

Draw diagrams of circuits for obtaining maximum output and maximum efficiency.

5. What is meant by modulation percentage in wireless telephony ?

How would you measure the same (a) at the transmitter, and (b) at a distance of a few miles from the transmitter ?

## PURE CHEMISTRY

## INTERNAL EXAMINERS

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## PHYSICAL CHEMISTRY—GENERAL PAPER

*Not more than six questions are to be attempted*

*The questions are of equal value*

*Logarithmic tables will be supplied*

1. Give a clear account of Maxwell's law of distribution of velocities in an assemblage of gas molecules, and assuming it deduce expressions for :—

(i) the most probable velocity,  $C_w$ ; (ii) the mean velocity,  $\bar{c}$ ; and (iii) the root-mean-square velocity  $\sqrt{c^2}$  of the molecules when they are at a temperature  $T$ .

Calculate the values of  $C_w$ ,  $\bar{c}$ ,  $\sqrt{c^2}$  for hydrogen, given the following data :—

Molecular weight of hydrogen ... 2

Gas constant  $R$  ...  $8.31 \times 10^7$  ergs / degree.

2. Deduce the equations of corresponding states from the equations of Van der Waals and Dieterici. Discuss the range of validity of these equations.

3. What are indicators ? What do they really indicate ? Explain clearly what will happen when to 10 c.c. of  $\frac{N}{50}$  KOH solution in a basin you add from a burette 10.05 c.c. of  $\frac{N}{50}$  acetic acid using the following indicators : phenolphthalein, methyl orange, and litmus. Will there be any difference if instead of acetic acid,  $\frac{N}{50}$  HCl is used as the titrating acid ?

[The dissociation constant of acetic acid at 25°C. is  $1.8 \times 10^{-5}$  ; strong acids and salts may be assumed to be completely dissociated.]

Or,

Explain, giving practical examples, the use of ' buffer solutions ' in  $P_H$  evaluations.

Discuss the range of application of the hydrogen and the quinhydrone electrode respectively, giving a brief outline of the theory underlying each.

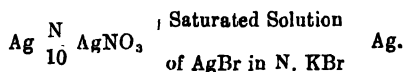
4. Describe the principal methods of measuring equilibria in homogeneous gas reactions of the first and second type (i.e., in reactions in which there is no change in the total number of molecules in the system and in which there is a change in the total number of molecules in the system respectively), illustrating your answer by examples in which these methods have been applied technically.

Or,

Give a clear and concise account of the development of the law of mass action and deduce it from theoretical considerations. How has it been experimentally verified ? Do you know of any case where the law as enunciated by Guldberg and Waage fails ? How has the result been explained ?

5. Write an essay on the methods available for the determination of solubility of a salt which is very slightly soluble in water.

The E.M.F. of the following cell was found by Ostwald to be 0.64 volt at 18°C. Calculate the solubility product and solubility of silver bromide :—



At 18°C.  $\frac{N}{10}$  Ag NO<sub>3</sub> and N. KBr solution may be taken to be 81.3 and 75.5 per cent. dissociated respectively.

6. Write an essay on the discovery of radioactivity and its effect on chemical theory.

7. Give a clear account of Perrin's work in the determination of the Avogadro Number N.

8. Write a note on the properties of solutions of sodium oleate which distinguish it from solutions of sodium acetate, and explain clearly why the former is called a colloidal electrolyte, and discuss the theories advanced to account for their behaviour.

9. Deduce thermodynamically the relations between the lowering of freezing point, the elevation of boiling point, and the relative lowering of the vapour of a pressure of a solution.

A solution of 24.67 gm. of colloidal tungstic acid per litre gave an osmotic pressure of 25.2 cm. of mercury at 17°C. Find the molecular weight of colloidal

tungstic acid, and discuss whether there is association of the simple molecules of tungstic acid ( $\text{H}_2\text{WO}_4$ ) in the colloidal state ( $W=184$ ).

Or,

Deduce thermodynamically a relation between the heat of chemical reaction that takes place in a galvanic cell, and the temperature coefficient of electromotive force.

The E.M.F. of the cell



is  $E = 0.96468 + 0.000174(t - 25) + 0.00000038(t - 25)^2$ . If 585 cal. are evolved by the removal of 1 gm. atom of Pb from a heterogeneous Pb amalgam containing  $\text{Pb}_2\text{Hg}$  as the solid phase, calculate the heat of the reaction occurring in the cell at  $18^\circ$ .

10. (a) Construct an equation for the velocity constant of the catalytic hydrolysis of methyl acetate in presence of acetic acid. Assume that the initial concentration of the ester is  $b$ ; that  $x$  mols of acetic acid are liberated after time  $t$ , whilst  $a$  mols of acetic acid are present at any given moment.

(b)  $a$  gm. mol of Et. acetate are dissolved in a mixture of  $v_1$  vol. of dilute  $\text{HCl}$ , and  $v_2$  volume of  $\text{C}_6\text{H}_6$ . As the ester hydrolyses in the acid layer fresh quantities are withdrawn from the  $\text{C}_6\text{H}_6$  layer. The partition coefficient of the ester between  $\text{C}_6\text{H}_6$  and water is  $C$ . Show that the velocity constant is given by—

$$k = \frac{1}{t} \cdot \frac{v_2 + v_1 \cdot C}{v_1 \cdot C} \cdot \log_e \frac{a}{a - x}.$$

Or,

(a) Explain clearly with illustrations the following :—

(i) Consecutive reactions,

(ii) Side reactions.

Discuss Wegscheider's Test for side reactions fully, and point out its limitations.

(b) Obtain an expression for the velocity of a unimolecular reaction which does not proceed to completion, but arrives at a state of equilibrium, the opposing reaction being also unimolecular. Bring out the formal resemblance of this expression to that obtained in the treatment of complete reactions. Discuss the application of the equation you derive to any specific case.

## PHYSICAL—SPECIAL—FIRST PAPER

*The questions are of equal value*

*Not more than FIVE questions are to be attempted*

*Logarithmic tables will be supplied*

1. What is the Born Lattice theory of Polar Crystals, and what is meant by 'Lattice energy' of such crystals? Define the term electron affinity of an electro-negative element, and point out how the same for chlorine can be calculated from the lattice energy of sodium chloride. Does the term electron affinity refer to free or total energy change?

2. Deduce Maxwell's law of distribution of velocities in an assemblage of gas molecules. Illustrate the use of this equation in the kinetics of chemical reactions in gaseous systems.

3. Give a review of the different methods that have been proposed for determining the dissociation constants of polybasic acids, and discuss *one* method in detail.

4. Deduce an exact relation between osmotic pressure of *any* solution and the relative lowering of its vapour pressure. Describe a modern method for measuring the osmotic pressure of concentrated solutions.

5. Describe in details a method for determining the atomic weight of a gaseous element from density measurements.

6. Give an account of Brönsted's work on the solubilities of salts. How would you interpret his results ?

Or,

Describe in detail the various methods and their theoretical basis that are available for determining degree of hydrolysis.

The following figures were obtained for the inversion of cane sugar in presence of 0.5N  $\text{Al}(\text{NO}_3)_3$  at  $80^\circ$  :—

$t$ (min)	...	0	45.7	62.1	76.8	$\infty$
$\alpha^\circ$	...	10.50	3.15	1.47	0.33	-3.03

where  $\alpha$  is the polarimetric rotation. The inversion constant in presence of, 0.001N  $\text{HNO}_3$  is .00225. Calculate the degree of hydrolysis of  $\text{Al}(\text{NO}_3)_3$  at  $80^\circ$ .

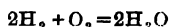
7. Write an essay on the Donnan equilibria with special reference to recent work.

8. What do you mean by 'atomic number' ? Describe Chadwick's experiment by which the atomic number of certain elements have been determined.

Or,

Write an essay on positive ray analysis, giving clearly the theory of Sir J. J. Thomson.

9. It has been said that the ultimate aim of theoretical chemistry is to arrive at a general method of calculating affinities of chemical reactions, from as small a number of experimental data as possible. Discuss this statement, and in the case of the reaction



deduce expressions for the heat of reaction  $Q$ , and the affinity  $A$ , both over wide ranges of temperature.

Specify all the data required for calculating numerical values of  $Q$ , and  $A$  at any temperature. Indicate briefly how this reaction has been investigated.

Or,

Write an essay on the 'active centres' and the structure of catalytic surfaces in heterogeneous reactions, with special reference to the work done in the last decade.

## PHYSICAL.—SPECIAL.—SECOND PAPER

*The questions are of equal value*

*Not more than FIVE questions are to be attempted*

1. Give a critical account of the Debye-Hückel-Onsager theory of strong electrolytes, pointing out clearly the assumptions made therein, and the experimental evidence on which it rests. How has the theory been tested?

2. Explain what is meant by electronic, vibrational, and rotational transitions of a diatomic molecule. Indicate the approximate energy difference in volts-electron and in calories per gm-mol between two successive levels as also the magnitude of the frequencies of radiation emitted or absorbed as a result of such transitions.

3. Write an essay on the foundations of the quantum theory.

4. 'In photochemical processes the atomic mechanism is particularly common, indeed perhaps universal.' Discuss the above statement critically, with reference to some remarks from recent cases.

*Or,*

'In the very difficult region of experimental photochemistry the Einstein's Law of Photochemical Equivalence now serves as the sure guide for explaining the mechanism of chemical transformations.' Discuss the above statement of Bodenstein, with special reference to recent researches on the subject, and show how far it is correct or otherwise.

5. Write a critical essay on the present state of our knowledge of unimolecular homogeneous gas reactions.

6. Give a critical account of the various methods that have been proposed to measure 'Overvoltage' and give one method, which you think best, in detail. Discuss the various theories that have been put forward to explain this phenomena, with special reference to recent work.

7. Give in detail the chemistry of protoactinium, with special reference to the work of O. Hahn and A. von Grosse.

*Or,*

Write an essay on Isotopes, indicating briefly some present-day lines of attack on the problem of their separation.

8. Describe the properties and uses of (1) gelatine, and (2) silica gel. Explain fully what is meant by the isoelectric point.

*Or,*

What is a protective colloid? Describe an experimental arrangement by which it is possible to determine accurately the protective power of a substance, and discuss critically the various theories put forward to explain the protective action.

9. Write an essay on *any one* of the following :—

- (1) Amphoteric Electrolytes.
- (2) The proteins from a physico-chemical point of view.
- (3) Glass Electrode and its applications.
- (4) The application of molecular spectra in the domain of photochemistry.

## ORGANIC CHEMISTRY—GENERAL PAPER

*The questions are of equal value**Not more than six questions are to be attempted*

1. Write a short essay on the abnormal valency of carbon.
2. What do you know about Pinacone-Pinacolone Transformation? Illustrate this reaction with examples both from cyclic and open chain series of organic compounds.
3. Discuss fully the constitution and space configuration of *l*-arabinose.
4. Illustrate the use of the following substances in typical condensation reactions: hydrochloric acid, sodium ethoxide, piperidine, and finely divided copper.
5. How are the following substances prepared?—
  - (a) Phenyl propiolic acid.
  - (b) Dimethyldihydroresorcinol.
  - (c) Arsenobenzene.
  - (d) Acetyl acetone.
  - (e) Diazomethane.
  - (f) Quinaldine.
6. Give a brief account of Baeyer's researches on indigo. Describe in detail any one method for the commercial production of this substance.
7. Write what you know about the chemistry of the amidines. Describe the uses of benzamidine in the synthesis of ring compounds.
8. How is methylheptenone best prepared? Mention two important syntheses of terpenes in which methylheptenone has been employed.
9. The following composition has been proposed for a compound  $C_6H_3(CH_3)(OCH_3)(CO_2CH_3)(1:2:3)$ . Explain clearly how you would proceed to establish it experimentally.

## ORGANIC—SPECIAL—FIRST PAPER

*The questions are of equal value**Not more than five questions are to be attempted*

1. Write a short essay on 'Tautomerism,' with special reference to intra-annular Tautomerism.
2. Give a detailed account of the physiological properties of optical and geometrical isomers. How is the selective action of yeast on the different hexoses explained on the basis of their stereochemical configurations?
3. Give an account of the properties of 2:3:6-trimethylglucose, and their bearing on the chemistry of the different saccharides. Describe the method by which it has been prepared.
4. What are your arguments in favour of the constitutional formula assigned to muscone at present? Give a short review of the methods employed for the synthesis of such carbon rings.

5. By what synthetical and analytical methods has the molecular constitution of  $\alpha$ -pinene been established? How is synthetic camphor made from  $\alpha$ -pinene?

6. Write what you know about catalytic organic reactions, with special reference to (a) Hydrogenation and dehydrogenation, (b) hydration and dehydration.

7. Write short notes on the following :—

- (a) Dieckmann condensation.
- (b) Reformatsky's reaction.
- (c) Guareschi condensation.

8. How are the following substances prepared?—

- (a)  $\beta$  acetyl adipic ester.
- (b) Methylene aminoacetonitrile.
- (c) Stovarsol.
- (d)  $\alpha$ -dimethyl-glutaconic acid.
- (e) Chloretone.

### ORGANIC—SPECIAL—SECOND PAPER

*The questions are of equal value*

*Not more than FIVE questions are to be attempted*

1. 0.2213 gramme of an aromatic liquid *A* containing C, H, and O gave, on combustion, 0.1486 gramme of water, and 0.6539 gramme of carbon dioxide. Its vapour density was found to be 67. On shaking the liquid with hydroxylamine hydrochloride and excess of aqueous alkali, a clear solution was obtained, from which carbon dioxide precipitated a crystalline solid *B*, containing 10.0 per cent. of nitrogen. On treating *B* in cold, dry ethereal solution with a little phosphorus pentachloride, a product was obtained, from which on hydrolysis with concentrated alkali, a considerable amount of *para*-toluidine was formed. Deduce the constitutional formula of *A* and *B*. What alternative structure might be assigned to *B*, and what would, then, be its behaviour under the conditions mentioned above?

2. Write the structural formula of any three amino acids (other than amino acetic acid) formed as degradation products of natural substances, and indicate how any two of these acids could be prepared synthetically. How may polypeptides be obtained from amino acids?

3. Give a brief account of the indigoid vat dyes.

4. Give a brief account of the various anthocyanins that have been investigated. Describe a general method of synthesising anthocyanidins.

5. Establish the constitutional formula for Ricinine.

6. Discuss briefly Wagner-Meerwein transformation, illustrating your answer with some characteristic types of examples.

7. Give a resume of the present state of our knowledge of the naturally occurring anthraquinone derivatives, with special reference to the constitution and method of synthesis of (i) Morindone, (ii) Chrysophanic acid, and (iii) Rubiadin.

8. How are the following prepared?—

- (a) Diindyl.
- (b) Phloretin.
- (c) Pyrimidine.
- (d)  $\beta$ -methyl indole.
- (e) Cumaline.
- (f) Acriflavine.



## INORGANIC CHEMISTRY—GENERAL PAPER

*The questions are of equal value*

*Only SIX questions are to be attempted*

1. State the nature and properties of  $\alpha$ -,  $\beta$ -,  $\gamma$ -, and X-rays. Describe briefly how the study of these rays has helped the development of chemical science.

2. Write a note on the physico-chemical aspects of modern analytical practice.

3. What are thionic acids and their relation to thiosulphuric acid? Describe the preparation and the general behaviour and properties of these acids.

4. Name the important ores of nickel, and indicate the Indian source of supply. How is the metal extracted from its ores, and what are its uses? How is nickel freed from cobalt on a large scale?

5. Indicate the methods of preparation of the following substances, and state their properties and uses :—

- (a) Sodium azide.
- (b) Hyponitrous acid.
- (c) Thorium nitrate.
- (d) Chromous chloride.

6. Describe, as fully as you can, the chemistry of the element molybdenum and its industrial uses.

7. Compare the physical and chemical properties of the elements of Group IV of the periodic table together with their compounds.

8. A finely divided mixture of lead peroxide and lead nitrate when heated in vacuum gave, after complete decomposition, a mixture of gases containing 33.3 per cent of oxygen and 66.6 per cent. of  $\text{NO}_2$ . Determine the percentage composition of the solid mixture.

## INORGANIC—SPECIAL—FIRST PAPER

*The questions are of equal value*

*Only FIVE questions are to be attempted*

1. Write a short essay on the theory of valency, noting specially the newer developments on the subject. How would you account on the basis of the modern conception of atoms for the variable valency of phosphorus, sulphur, and nitrogen?

2. Explain and illustrate what is meant by radioactive equilibrium. Give a brief account of the methods employed for studying the properties of short-lived radioactive elements. Cite instances, that you know, of the application of radio-elements in the discovery of new compounds.

3. Discuss the chemical reactions that occur in the Lead Chamber during the formation of sulphuric acid, with special reference to the contributions made by Lunge, Raschig, and Manchot on the subject. How would you estimate the amount of nitric acid in a sample of the chamber acid?

4. Give a short account of the types of co-ordinated inorganic compounds which exhibit (1) geometrical, and (2) optical, isomerism. Enumerate with examples the factors which influence the formation of optically active compounds of increasingly large rotations. Give instances of mutarotation of active co-ordinated compounds.

5. Discuss *any three* of the following in terms of the electronic theory :—

- Oxidation of oxalic acid by potassium permanganate in sulphuric acid solution.
- Oxidation of manganous sulphate by potassium permanganate in neutral solution.
- Constitution of sulphuric and thiosulphuric acids.
- Reactions in the accumulator cells.

6. How are the following substances prepared?—

Hydrazine sulphate, permonosulphuric acids, silicon chloroform, phosphomolybdic acid and *d*-triethylenediamine chromic chloride.

7. The percentage composition of a mineral is given below :—

K <sub>2</sub> O	...	...	0, 22
MgO	...	...	3, 80
CaO	...	...	10, 25
MnO	...	...	trace
FeO	...	...	6, 02
Al <sub>2</sub> O <sub>3</sub>	...	...	12, 88
Fe <sub>2</sub> O <sub>3</sub>	...	...	10, 01
Sc <sub>2</sub> O <sub>3</sub>	...	...	0, 80
Ce <sub>2</sub> O <sub>3</sub>	...	...	16, 45
SiO <sub>2</sub>	...	...	80, 52
ThO <sub>2</sub>	...	...	1, 32
H <sub>2</sub> O	...	...	7, 34

Draw up a scheme for its qualitative analysis, and determine the formula of the mineral.

## INORGANIC—SPECIAL—SECOND PAPER

*The questions are of equal value*

*Only five questions are to be attempted*

1. Describe the chemistry and isolation of the element Hafnium. Compare the compounds of hafnium with those of zirconium. How would you evaluate their percentages in a mixture?

2. What are ceramics, and how are they classified? What are the raw materials required for the manufacture of porcelain and the methods adopted in purifying the china-clay to be used for this purpose?

3. How and where do gold and platinum occur in nature, and how do you account for it? How is pure platinum obtained? Give a short account of the chemical properties of platinum, with special reference to the various types of its compounds, and compare them with those of its horizontal neighbours.

4. What do you know of the simple, double, and complex sulphates of chromium? Fully describe the physico-chemical methods employed in the study of these compounds and their hydrolysis.

5. How does zinc occur in nature, and with what other metals is it found to be associated? How is the metal extracted from such minerals? State the reasons for the low efficiency of the Belgian method of extraction, and how far electrothermal heating has been found successful in removing some of the defects.

6. Describe the preparation, and compare the properties, of the *trivalent* compounds of titanium, vanadium, molybdenum, and manganese.

7. Give a critical survey of the methods of isolation of the Terbium earths.

## APPLIED CHEMISTRY

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 „ R. N. SEN, M.A., M.Sc.

## FIRST PAPER

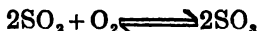
*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be attempted*

1. Give a brief account of the discovery of the inert gases, and discuss their position in the periodic table. How are helium, argon, and neon prepared commercially? State the special properties of these gases on which their industrial applications depend.

2. Discuss the effect of change of temperature and pressure on the equilibrium of the reversible reaction



and mention the substances that have been successfully employed for increasing the rate of the above reaction.

Compare this process of making sulphuric acid with the lead chamber process, and give your opinion why the latter process has been adopted in India in preference to the former.

3. Give the names and whereabouts of three Portland cement factories in India, and state what you know about the quality and output of Indian cement. Explain as far as you can the chemistry of the processes of clinkering, setting, and hardening of Portland cement.

4. Compare the pyrometallurgical and electrochemical methods of refining blister copper, and state the approximate composition, properties, and uses of as many alloys of copper as you can.

5. Write an essay on the chemistry of photography.

## SECOND HALF

*Try ANY THREE of the following*

1. How is amyl alcohol manufactured in commerce? What are the methods for separating the constituents? Describe their uses in the preparation of various industrial products.

2. Describe the manufacture of gelatine. Indicate the chief reactions which it undergoes with chemical reagents.

3. Write notes on *any two* of the following :—

- (a) Treatment of fibres for paper making.
- (b) Defecation.
- (c) Valuation of coal.
- (d) Vulcanisation of rubber.
- (e) Chrome tanning.

4. Describe the preparation of *any four* of the following :—

- (a) Phenacetin.
- (b) Adalin.
- (c) Pure chloroform.
- (d) Veronal.
- (e) Acriflavin.

5. What are the sources of the following substances, and how are they obtained?—

- (a) Glycerol.
- (b) Cocaine.
- (c) Starch soluble.
- (d) Morphine.

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## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

*Only THREE questions are to be attempted*

1. (a) 300 cu. ft. of a perfect gas at  $127^{\circ}\text{C}$ . and 80 lbs. pressure per sq. in. is allowed to expand reversibly and isothermally to a volume of 450 cu. ft. What is the amount of heat absorbed by the gas from the external sources during the change? Explain the property of the gas besides pressure and volume which is changed during the expansion.

(b) The same amount of the gas under the same conditions expands adiabatically to 450 cu. ft. What is the amount of work performed by the gas?

2. (a) Heat of formation of a gm-mol of liquid water is 68,400 calories. With simplifying assumptions calculate the minimum voltage necessary for the electrolytic decomposition of water.

(b) Normal decomposition potential of sodium chloride is 4.07 volts, but in the industrial production of alkali and chlorine Griesheim cells require 8.5 K.W.H. per kilogram of sodium hydroxide. What is the energy-efficiency of such cells?

3. Discuss clearly from the physico-chemical standpoint the nature of emulsions and suspensions, and the steps taken in chemical industries for their formation and stabilization.

4. Define the affinity of a chemical reaction and the equilibrium constant. Deduce the relation between the two. Does a catalyser influence the value of the equilibrium-constant?

5. Discuss the equilibrium between a binary liquid mixture and its vapour with reference to phase-rule diagrams at either constant temperature or constant pressure.

## SECOND HALF

### GROUP I—INORGANIC

*Only ONE question to be answered*

1. How would you evaluate a sample of (i) chromite, (ii) a sample of pyrolusite, explaining the principles involved in each case?

2. Give outlines of the method for analysing any two of the following commercial products:—

(1) Phosphor bronze; (2) Superphosphate; (3) Portland cement.

3. You are given a sample of boiler feed water. How would you proceed to analyse it with regard to its suitability for boiler use? Assuming the sample of water to be a hard one, how would you adjust the proportions of softening agents commonly used?

### GROUP II—PHYSICAL-ANALYTICAL

*Attempt ONE question only*

1. What is meant by the international sugar scale? Give an account in full of the polarimetric method of estimating the amount of cane sugar in a solution.

2. How would you proceed to estimate the amount of acid in a solution which is coloured, giving reasons for the particular method selected? Would the direct determination of  $P_H$  of the solution be likely to give the result? If not, give reasons for your answer.

### GROUP III

*ONE question only to be answered*

1. Give a short account of the methods used in the examination of milk as supplied from suburbs to a city.

2. How would you estimate:—

(a) Olefines and Aromatics in neutral oil from Coal Tar;

(b) Ethyl and Butyl alcohol in Fermentation liquors?

3. What are the different methods adopted for determining halogens in organic compounds. Discuss their respective merits and demerits.

## THIRD PAPER

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be answered*

1. Explain clearly the theory of a rectifying column of the overflow type, indicating how these principles can be utilized for the actual calculation of plate numbers in practice.

2. Classify the various types of refrigerators, and describe any one of them with full theoretical and practical details.

3. Arrive at the formula for the efficiency of a Diesel engine.

Calculate the efficiency in the case of an engine having a compression ratio of 18.5 and in which the fuel is cut off at 0.05 stroke.

4. A pump takes water at 50°F. from a river and delivers it to the bottom of an open elevated tank. The level in the tank averages 160 feet above the surface of the river. The line is three inches standard pipe and its equivalent length (straight pipe plus equivalent length of fittings) is 537 feet. The pump delivers 150 gallons per minute.

Write down the equation for the theoretical horsepower of the pump for this performance (final solution is not required).

5. Describe any industry based upon very high pressure, and explain clearly with the help of diagram how the valves are constructed for such high pressure operations. How are leaks tested in such cases?

6. Write notes on :—

- (i) Gaillard towers; (ii) Principle of counter current; (iii) High pressure steam trap; (iv) D-slide valves; (v) Magneto.

## SECOND HALF

*Answer ANY THREE of the following*

1. Describe, with a neat sketch, the working of a Gyratory Crusher. Mention the types of work for which it is most suitable. What are its advantages over the Blake Jaw Crusher?

2. What should be the diameter of a set of rolls which takes a feed one inch in diameter and crush to 0.25 inch, if the coefficient of friction is 0.35?

Calculate the amount in tons of limestone crushed by the above crushing rolls per hour from the following data :—

Width of roll faces	... 12 inches.
Revolution of the rolls	... 120 per minute.
Specific gravity of limestone	3.2

Actual capacity of the rolls is 15 per cent. of the theoretical.

3. What is the essential difference in principle between a Filter-press and Suction Leaf Filter? Discuss the relative merits of the two types.

4. Describe, with neat sketches, the working of a Washing type of Plate and Frame Press (i) during filtration, and (ii) during the washing operation.

5. You are required to concentrate 1,500 gals. of a 5% solution of caustic soda to 50% strength per day. Give a sketch of the evaporator you would employ for the purpose. Give reasons for your choice of the particular type.

6. Write a short essay on your visit to any one of the following factories with brief description of the apparatus employed at different stages of the process :—

- (1) Rhotas Cement Factory.  
(2) Tittagurh Paper Mills.

## FOURTH PAPER

## (SILICATES)

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be answered*

1. Give the general layout of a modern glass furnace working with producer gas or water gas on the regenerative system. Indicate clearly the valve changing arrangements.

2. Write an essay on the heat balance in a tank type of glass furnace. What is meant by the modulus of conductivity of a firebrick?

3. Give an account of the various decolourisers used in glass manufacture and the principles of their action.

How is ruby glass prepared? How are the more common coloured glasses manufactured?

4. Write notes on :—

(a) Ground and cover of an enamelled ware; (b) 'Poling'; (c) Recuperators; (d) Rotary kiln for cement; (e) Etching on glass.

5. Discuss the different factors that contribute to the thermal endurance of glass. How would you compare the thermal endurance of different kinds of glass?

## SECOND HALF

*Only THREE questions are to be answered*

1. Describe clearly the various stages in the manufacture of double-cup electrical insulators. What are the chief characteristics of porcelain insulators?

2. How would you classify different kinds of refractory bricks for industrial furnace lining? State with your reasons the kind of brick you would employ for lining—

(a) Rotary kiln for cement manufacture;

(b) Tank furnace for glass manufacture;

(c) Muffle oven for pottery.

8. What informations are necessary for the proper choice of a clay to be used in ceramic industry?

The wet recipe of an earthenware body is given below :—

14 inches of Ball-clay at 24.5 oz. per pint.

9 inches of china clay at 25.5 „ „ „

6.5 „ „ flint at 31.7 „ „ „

8 „ „ stone at 32.2 „ „ „

Report the dry recipe of such a body and convert the same into percentage composition.

4. Write an essay on the prospect of Portland cement industry in India.

*Or,*

An essay on photoceramics.

## FOURTH PAPER (FERMENTATION)

*The questions are of equal value*

### FIRST HALF

*Only THREE questions are to be answered*

- (a) Discuss the rôle of diastase in relation to the fermentation industry.
- (b) Give the morphological distinction between mucor, penicillium, and aspergillus. State the uses of aspergillus niger.
2. Give an account of the recent theories of alcoholic fermentation, specially indicating the rôle played by hexosephosphatase and carboxylase.
3. Classify the more commonly used enzymes, giving as many examples as you can.  
What are the various methods generally employed for the preparation and purification of enzymes?
4. How do you account for the occurrence of (a) Amyl alcohol, (b) Glycerol, (c) Acetaldehyde in ordinary alcoholic fermentation?  
Give a scheme for the analytical estimation of all the above three when they occur together.
5. Write notes on :—  
(i) Facultative anaerobes; (ii) Thermophilic organism; (iii) Single cell culture; (iv) Haemocytometer; (v) Autolysis; (vi) Extracellular and intracellular fermentation.

### SECOND HALF

*Answer ANY THREE questions*

1. Write a short essay on *any one* of the following Indian biochemical industries :—  
(a) The Sugar Industry.  
(b) The Lac Industry.  
(c) The Leather Industry.
2. Describe carefully how you would obtain *any two* of the following enzyme preparations in a condition of maximum efficiency :—  
(a) Zymase from yeast.  
(b) Invertase from yeast.  
(c) Papain from papaya fruit.  
(d) Amylase from malt.
3. Describe how you would examine, *e.g.*, a sample of wet paddy soil for the simultaneous presence of aerobic and anaerobic bacteria, protozoa, and algæ.
4. Describe carefully how *any two* of the following determinations are made, illustrating their use in the study of biochemical change :—  
(a) Hydrogen-ion concentration.  
(b) Viscosity.  
(c) Specific gravity.  
(d) Electrical conductivity.
5. Describe the conditions necessary for the efficient 'nitrification' of ammonia by the action of nitrifying organisms. How are these achieved in the methods used for the purification of sewage?



## FOURTH [PAPER

## (OIL TECHNOLOGY)

*The questions are of equal value*

## GROUP I

*Try ANY THREE of the following*

1. How are the following industrial operations done?—
  - (a) Refining of H, O, and P.
  - (b) Distillation of crude Petroleum.
2. Write notes on :—
  - (a) Utilization of petroleum products in side industries;
  - (b) Sweating of Paraffins.
3. By what methods can you ascertain the degree of unsaturation and amount of unsaturated glycerides in fixed oils?
4. How do you propose to harden a sample of whale oil? Give a sketch of the apparatus you use. What will be the changes, physical and chemical, as also in its variable and characteristic values after the operation?

## GROUP II

*Try ANY THREE of the following*

1. Describe the different changes which vegetable oils undergo on heating them with or without catalyst, with notes as to their applications of such transformations.
  2. Describe the properties of the sodium salts of lauric, palmitic, stearic, and oleic acids. How are these utilized in industries?
  3. What are prefixators? What are their utilities in blending of perfumes? How are *any three* of the following prepared?—
    - (a) Indol,
    - (b) Benzylacetate,
    - (c) Vanillin,
    - (d) Musk ketone.
  4. How would you proceed to make valuation of cloves oil, lemongrass oil, and turpentine oil? Describe the manufacture of one synthetic perfume from the most important constituent of each of the above mentioned oils.
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## BOTANY

## INTERNAL EXAMINERS

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## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. What do you know of the life-history of the Indian species of terrestrial green algæ belonging to the group *Heterosiphonales*? Add notes on their systematic position in relation to the different groups of algæ.

2. Write an essay on the life-history of a cœnocyctic green filamentous alga devoid of starchy contents. Discuss the systematic position, tracing its affinities with similar members in *Fungi*.

3. Describe and contrast the asexual and sexual methods of reproduction in *Mougeotiaceæ* and filamentous *Desmidiaceæ*. Illustrate your answer with sketches.

4. Describe the various processes of asexual reproduction and perennation in *Mosses* and *Hepatics*. Discuss the biological significance of such processes.

5. Compare the vegetative and reproductive organs of *Marchantiaceæ* and *Ricciaceæ*, with special reference to their biological adaptations in the scale of evolution. Illustrate with sketches of Indian species.

## SECOND HALF

*Answer THREE questions only, of which the SECOND one is compulsory*

1. Give some examples of the 'physiological races' of the smut fungi, and explain their economic importance. What are saltants, and what are true mutants?

2. What is a filterable virus?

Describe the morphological and cytological aspects of the virus diseases of plants. Discuss all the recent theories regarding the nature of virus diseases. How would you control virus diseases?

3. 'Conidiophores are the ancestral form of basidia.' How do you defend this statement?

4. Some kinds of higher fungi grow only near certain species of forest-trees. What explanation can you offer for this fact? Name some of the fungi you commonly come across in coniferous forests and in deciduous woods.

5. What do you understand by the diploidisation of the haploid mycelia? How is the process carried on? Can two oidial mycelia of opposite sex diploidise each other?

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## SECOND PAPER

### FIRST HALF

*The figures in the margin indicate full marks*

THREE questions are to be attempted, of which Question No. 1 is compulsory

1. Write a short essay on *any one* of the following subjects :— 20
  - (a) The alternation of generations in plants and its biological significance.
  - (b) Extinct plants and evolution.
  - (c) The origin of Pteridophytes.
2. Write an outline classification of the Filicales, giving the distinguishing features of the chief families. 15
3. State what you know of the evolution of the Lycopodean vascular system. Illustrate your answer with sketches and examples. 15
4. Write an account of the life-history and anatomical features of a member of the Ophioglossaceæ you have studied. Describe the affinities of the group with its distribution in time. 15
5. Write an account of the life-history of *any* of the Hydropteridineæ that you have studied in the class. Give the distribution of the group in Bengal. 15

### SECOND HALF

#### (GYMNOSPERMS)

*The figures in the margin indicate full marks*

1. Discuss the affinities between the cordaitules and other gymnosperms. 10
2. Say what you know of the distribution of living and fossil conifers in India. Refer to recent researches on the subject. 10
3. Describe the structure and life-history of any Indian member of the Gnetales. 10
4. Give a brief account of (a) the filicinean, and (b) the cycadean features of the Cycadofilicales. 10
5. Give a comparative account of the male gametophyte in the conifers. 10

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## THIRD PAPER

## FIRST HALF

*The questions are of equal value*

1. Give an account of the floral morphology in the genus *Gnetum*.  
Or,
2. Bladders of *Utricularia* are instances of metamorphosed leaf. Explain this.
3. Describe the process of secondary growth in the root of the *Taxineæ*. Mention any similar case in the *Angiosperms*.  
Or,
4. What are bordered-pits? What is their function?

## SECOND HALF

*The questions are of equal value*

*Answer ANY THREE questions*

1. *Either,*  
What are the characters on which the systematic divisions of the Gramineæ are based? Illustrate your answer with reference to the system of classification adopted by you.  
Or,  
Give a general account of the Lemnaceæ, and discuss its affinities. Mention the species occurring in India, and give their geographical distribution.
2. Give a general account of the Casuarinaceæ, drawing particular attention to the characters which led to the family being considered the most primitive among the Dicotyledons. Give the geographical distribution of the Genus *Casuarina*.
3. Give a general account of the range of floral structure in the Anacardiaceæ, and discuss its affinities. Mention the principal Indian genera of the family, and give the geographical distribution of the species of economic importance.
4. Give a general account of the Tubifloræ as defined by Engler, mention its subdivisions and discuss their phylogenetic relationships.
5. Write a short essay on "Plant Associations."

*Or,*

Mention the various plantgeographical elements composing the Bengal flora, and indicate the sources of their probable origin.

## FOURTH PAPER

## FIRST HALF

*The questions are of equal value*

*Answer only two questions*

1. Describe the changes that take place in plant structures due to—  
(a) freezing;  
(b) exposure to very high temperatures.
2. Give an account of positive and negative gaseous pressures in the inter-cellular spaces of plant structures.

8. What is anthocyanin? Give an account of the observations and experiments that have been made to elucidate the physiological significance of the presence of anthocyanin in vegetative organs.

## SECOND HALF

*The questions are of equal value*

*Attempt ANY THREE questions*

1. Give a detailed account of the various mechanisms which plants possess for utilizing atmospheric moisture.
2. Explain clearly the reason why the ecologist pays greater attention to vegetative organs than to floral structures.
3. What are the mechanisms in water plants for obtaining the necessary oxygen? Explain the underlying principle in each case.
4. What do you understand by Seasonal Succession in a Bengal meadow? Give an account of the factors responsible for it
5. Write an essay on the value of habit of a plant in ecological study.

## FIFTH PAPER

### FIRST HALF

*The questions are of equal value*

1. *Either,*

How far does paleontological evidence support the doctrine of evolution of plants?

*Or,*

Give the present position of our knowledge of evolution of plants, with special reference to the mono- and polyphylatic views.

2. Trace, with special reference to the distinct stages, the history of the gradual progress of our knowledge up to the present day of *either* Systematic Botany or Plant Physiology.

### SECOND HALF

*The questions are of equal value*

*Only THREE questions to be attempted*

1. Write a note on the cultivation and distribution of jute in Bengal. How is the fibre extracted, and how does it differ from the fibre obtained from cotton?
2. Describe briefly the technique of hybridizing sugarcane. What are the difficulties generally encountered, and what are the practices adopted?
3. Give an account of the present stage of our knowledge regarding red-determination in plants.
4. Write short notes on : (i) Mutation, (ii) Polyploidy, (iii) Allelomorphs, (iv) Cumulative factor, and (v) Diakinesis.

## PHYSIOLOGY

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## FIRST PAPER

N.B.—All questions carry equal marks. Not more than THREE questions  
are to be attempted

1. Name the various factors that influence coronary circulation and discuss their effects on it.
2. What are the responses of the human body to variations in atmospheric pressure? How may the ill effects due to pressure variations be avoided?

Or,

Describe in detail the respiratory centre in the brain. What are the factors which influence it?

3. Describe the histological appearances of the uterus under different conditions, and discuss to what extent the various appearances are dependent on internal secretions.

Or,

Give a detailed account of calcium metabolism, with special reference to all the different factors which influence it.

## SECOND PAPER

The questions are of equal value

Answer only FOUR questions

1. Discuss the changes that occur in the electrical condition, excitability, and conductivity of a nerve when a constant current flows along it.
2. Discuss the connections and functions of the Thalamus. What part does it play in emotional expressional movements?

3. Describe Langley's method of tracing the course of autonomic nerves. Give an account of the cranial autonomic fibres and their functions.

4. Compare a decerebrate animal with a thalamic animal, and show how the central nervous system as high as the thalamus is only a reflex mechanism which automatically protects the interests of the animal.

5. Discuss the rôle of the cerebellum in correlation of group movements, and describe the nerve paths concerned.

6. Compare the afferent fibres of the Trigeminal nerve with the posterior fibres of the special nerves as regards origin, course, and destination.

### THIRD PAPER

*The questions are of equal value*

*Answer only FOUR questions*

1. Describe the physiological functions of the otolith organs and semi-circular canals, and describe the main experiments which have elucidated them.

2. Give an account of the differences between vision of the foveal retina and vision with other regions of the retina.

What is the duplicity theory? Discuss the various experiments upon which this theory is based.

3. Describe the relationship of the hair cells of the organ of Corti to (1) the cochlear nerve fibres, and (2) the tectorial membrane. What are the central connections (1) reflex, and (2) cortical of the cochlear nerve?

4. Discuss the theories of hearing in relation to the two points of view that (1) tone-analysis takes place in the organ of Corti, and (2) tone-analysis is effected centrally.

5. Give an account of the chief cutaneous sensations. Discuss the importance of these senses in the preservation of the individual.

6. Describe the organ of smell including the structure of the olfactory bulb. Discuss the vestigial character of the olfactory sense.

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### FOURTH PAPER

*The questions are of equal value*

*Answer FOUR questions only*

1. Give an account of the metabolic phenomena associated with hibernation and the awakening therefrom.

2. Describe the metabolic peculiarities associated with diabetes. Discuss causes for its prevalence among Indians.

3. What is basal metabolism? Describe one of the methods of determination of basal metabolism. How is it affected by the activities of various endocrine organs?

4. Give a short account of purin metabolism. State the metabolic disorders associated with purins.

5. Give a detailed account of vitamins B and D.

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## ZOOLOGY

## INTERNAL EXAMINERS

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## FIRST PAPER

## FIRST HALF

*The questions are of equal value*

*Attempt ANY TWO of the questions*

1. Give an account of the distribution of the Marsupials, and indicate its importance from an evolutionary point of view.
2. What important advances in zoological knowledge are associated with the following names: Lankester, Haeckel, von Baer, and Lamarck?
3. Discuss the theory of Sexual Selection.
4. State what you know about Discontinuous Variations.

## SECOND HALF

Write an essay on *any one* of the following:—

- (a) Parasitism and Degeneracy.
- (b) Colouration and Mimicry.
- (c) Evolution of Birds.
- (d) Evolution of Mammals.

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Only two questions to be attempted*

1. Write what you know about the practical applications of the principles of Mendelian theory.
2. To what extent may the chromosomes be regarded as units which possess individuality of form and function?



3. Discuss the statement: 'The germ-cells are not produced by the body, but exist as an independent cycle, continuous from generation to generation, living in and nourished by the body, but not formed from it'.
4. Describe briefly what you know about the centrosome and its origin, and the nature and mechanism of the achromatic spindle.

### SECOND HALF

*Only two questions to be attempted*

1. Discuss the origin of the mesoderm in chordata.
  2. Describe the development of the vertebrate eye.
  3. Discuss the formation of respiratory organs in the vertebrata.
  4. Describe the development of teeth in the Mammalia.
  5. Discuss the effect of yolk on segmentation of the egg in Frog, Fowl, and Rabbit.
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### THIRD PAPER

*The questions are of equal value*

#### FIRST HALF

*Attempt ANY THREE of the following*

1. Describe the life-cycle of any protozoa living in blood, and discuss briefly the question of immunity in protozoal infections.
2. Give an account of the various modes of reproduction in Porifera, and comment on the ancestry of the group.
3. Describe the principal larval forms of Echinodermata. How can they be differentiated from one another?
4. Give a detailed account of the metamorphosis and life-history of a common Jelly fish.
5. What is filariasis? Give the bionomics of the organism concerned.

#### SECOND HALF

*Not more than THREE questions are to be attempted*

1. Write a detailed account of the Nephridia of the Chaetopoda.
  2. What do you understand by the term Torsion in Gastropod Molluscs?
  3. Classify the Lamellibranchia, and give with examples the important characters of various orders.
  4. Give a short account of the anatomy of Peripatus, and discuss its affinities.
  5. Write a comparative account of the appendages in Crustacea, and indicate the modifications they have undergone from the primitive type.
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### FOURTH PAPER

#### FIRST HALF

*The questions are of equal value*

*Only two questions to be attempted*

1. Classify Amphibia, giving reasons with examples.
2. Compare the respiratory system of a Tunicate with that of Amphioxus.

3. Give an account of Cyclostomata with distinctive characters of the subdivisions.
4. Give a detailed account of the excretory system in lower Chordates.
5. Describe and explain the more important adaptive modifications of the paired fins among fishes.

### SECOND HALF

*The questions are of equal value*  
*Attempt ANY THREE of the following*

1. Write what you know about the evolution of the Mammalian ear-ossicles
2. Discuss the theories on the originating cause of migration of Birds.
3. Give a detailed classification of Lacertilia.
4. Describe the structure and development of a typical feather.
5. Write notes on the following :—
  - (a) Pterodactyle.
  - (b) Ichthyopterygia.
  - (c) Pythonomorpha.
  - (d) Theromorpha.

## EXPERIMENTAL PSYCHOLOGY

### INTERNAL EXAMINERS

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 DR. B. C. GHOSH, M.A., M.B.  
 MR. HARIPADA MAITI, M.A.  
 „ GOPESWAR PAL, M.Sc.  
 „ MOHANLAL GANGULI, M.Sc.  
 DR. SUHRITCIANDRA MITRA, M.A., D.Phil.  
 „ GIRINDRASEKHAR BOSE, D.Sc.

### EXTERNAL EXAMINERS

MR. HARIDAS BHATTACHARYA, M.A.  
 PRINCIPAL C. H. RICE.  
 DR. NARENDRANATH SENGUPTA, M.A., Ph.D.  
 PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
 „ M. V. GOPALASWAMI.

### FIRST PAPER

*The questions are of equal value*

### FIRST HALF

*Only THREE questions to be answered*

1. Describe and illustrate the general characteristics of Reflex Action.
2. What, according to Pavlov, are the fundamental laws of the working of the cerebral hemispheres ?

8. Consider the relation between neuromuscular speech mechanisms and *thought*, in the light of recent experimental results.

4. Give a brief account of the functions of the Endocrine Glands, with special reference to their influence on personality and conduct.

5. Give a short account of the physiological mechanisms underlying our *pleasure-pain* experience.

6. 'The essence of cortical function is correlation and a cortical centre for the performance of a particular function is a physiological absurdity, save in a restricted sense, as a nodal point in a very complex system of associated conduction paths.' (*Herrick*). Explain and illustrate.

## SECOND HALF

*Only THREE questions to be attempted*

1. Write a short history of Behaviourism as a school of Psychology.

2. What are the principal conclusions concerning the nature of memory, that can be drawn from the data of the usual laboratory experiments? What are the basic assumptions in regard to the nature of memory implied in the *methods* of memory-experiments?

3. Write notes on the following :—

(1) Experiments on the problem of *imageless thought*.

(2) The nature and types of *introspection* demanded in laboratory experiments.

4. Write a critical estimate of the theory of *meaning*, with special reference to the following :—

Association theory, Apperception theory, 'Cortical Set' theory, and Kinæsthetic theory.

5. Discuss *one* of the following :—

(1) Theory of Geometrical optical illusions.

(2) James-Wundt theory of *self*.

(3) Recent views concerning the nature of *instinct*.

## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

*Try ANY THREE questions*

1. Discuss the *criteria* of *normality*.

2. Give a brief account of the *mental peculiarities* of a *hysterical* patient.

3. Write a short essay on the *Freudian Unconscious*.

4. Discuss the principles underlying a *psychoanalytic cure*.

5. Write short notes on : (a) *transference*, (b) *punishing conscience*, (c) *introjection*, and (d) *hypnosis*.

### SECOND HALF

*Attempt ANY THREE questions*

1. Discuss the different theories of Hypnotism.

2. Describe the phenomena that led to Prince's Concept of Co-conscious Personality. Contrast Co-conscious Personality with other types of dissociated personality.

3. Compare Adler's theory of neuroses with that of Jüing and that of Janet.
4. Give a short historical account of the development of Psychiatry.

Or,

Write a short essay on Feeble-mindedness, with special reference to its physiological basis.

5. Write notes on *any two* :—

Epileptoid Seizures, Dementia Præcox, Tics, Hormic Psychology.

### THIRD PAPER

*The questions are of equal value*

*Answer THREE questions from First Half and THREE questions from Second Half*

#### FIRST HALF

1. Are all modifications of animal behaviour intelligent ? Discuss this question with reference to lower organisms and higher animals.
2. Discuss the leading theories of the nature of the animal mind and their bearing upon the interpretation of animal behaviour.
3. Write notes on *any three* of the following :—  
 (a) Natural Selection, (b) Fabre's experiment on the olfactory sense of insects, (c) Regen's experiment on crickets, (d) Yerkes' experiment on the reaction of frogs to sound, (e) Homing pigeons.
4. Describe Pawlow's experiments on the salivary reflex of dogs.  
 What conclusions have been drawn from them regarding the nature of learning ?
5. Trace the gradual evolution of the sense of vision in the animal kingdom.

#### SECOND HALF

1. Describe at least two of Köhler's experiments regarding Building by Chimpanzees, and discuss on the basis of these experiments whether they possess any understanding of Statics.
2. What does Hobhouse mean by *ideas* ? Discuss fully whether higher animals are capable of ideas as defined by him.
3. Do you agree with Thorndike that the Law of Effect and the Law of Exercise are adequate to explain the acquired behaviour or learning of animals ? Discuss the question fully by reference to concrete cases and give reasons for your answer.
4. Write a short essay on the Limits of Animal Intelligence, confining yourself to the mentality of higher animals.
5. Discuss some of the leading types of mateship in the animal kingdom.  
 What do you understand by Sexual Selection ?

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Attempt ANY THREE questions*

1. Write a history of Child Psychology, noting specially the recent advances on the subject.
2. Outline the chief developmental stages of children's drawings. What light do they throw on the peculiarities of the child mind?
3. Contrast 'the world of a child' with that of an adult. Illustrate your answer.
4. Give an account of social development in Pre-school children, and indicate the conditions under which it usually fails or becomes abnormal.
5. 'From an unlimited and ill-defined background there has arisen a limited and somewhat definite phenomenon, a quality.' Explain the theory of mental development implied in this sentence. State the arguments advanced by Koffka in support of this theory.

## SECOND HALF

*Only THREE questions are to be attempted*

1. State and criticize Spearman's 'two factor' theory of intelligence.  
Discuss the basic principles involved in the construction and scoring of intelligence-tests.
2. Whom shall we call gifted?  
Sketch a composite portrait of the gifted child.  
What kind of educational facilities should be provided for them as a group?
3. Examine critically the 'trial and error learning' in the light of Koehler's studies of learning in Chimpanzees.
4. What are the causes of fatigue in school children? Enumerate the different methods of measuring mental fatigue.  
'What troubles school-pupils in the afternoon is not fatigue but boredom.'  
Examine this statement.
5. (a) Cite experimental evidences to show that 'the whole method of learning' is more economical than 'learning by parts'.  
(b) Describe some of the most important factors which influence 'Reading efficiency' in school children.
6. (a) Outline the various experimental studies on 'transference of training'.  
(b) Examine the educational implication of the experimental findings.
7. (a) Examine what is meant by 'New type examination'.  
(b) Describe some of the commoner forms of it.  
(c) Discuss the advantages and disadvantages of the 'new type examination'.
8. (a) Discuss whether arithmetic should be taught inductively or deductively.  
(b) Why are manual habits retained longer than verbal habits?  
(c) Discuss the relationship existing between the 'speed of learning' and 'retentiveness'.
9. Write a short essay on 'the effects of the "Psychological Movement" on the schools.'

*Or,*

Write a short essay on 'Montessori system of education'.

## GEOLOGY

## INTERNAL EXAMINERS

MR. SARATLAL BISWAS, M.Sc.

„ NIRMALNATH CHATTERJEE, M.Sc.

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## EXTERNAL EXAMINERS

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DR. CYRIL S. FOX, D.Sc.

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„ M. S. KRISHNAN, M.A., A.R.C.S., PH.D. (Lond.).

PROF. K. K. MATHUR, B.Sc., A.R.C.Sc., A.R.S.M.

## FIRST PAPER

*Question No. 1 is compulsory. Six questions in all to be answered, Question No. 10 being equivalent to any two other questions in value. One question at least from each of the Groups A, B, and C must be answered.*

*Candidates will be allowed the use of slide rules, mathematical tables, and valuation tables in the Examination Hall.*

1. Explain what you understand by coal carbonization. What are the principal products of low temperature and high temperature carbonization? What are the respective quantities of these products expected from a good Jharia coal? Give a short account of any carbonization plant you have seen.

## GROUP A

2. Write an essay on the origin of the earth, and discuss the various theories advanced.

3. What knowledge do we possess of the interior of the earth? On what evidences are the conclusions based?

4. Discuss the results arrived at by using purely geological methods for the determination of the age of the earth. Indicate how they may be liable to uncertainty.

## GROUP B

5. Write an essay on the processes of mineral formation, with special reference to ores and their associates. Give some Indian examples.

6. Discuss the theories of formation of mineral veins.

7. Explain the following terms : Gossan, ladder vein, saddle reef, Berginisation, propylitisation, greisenisation. Give examples where possible.

## GROUP C

8. Give an account of the economic geology of the Vindhyan System.

9. Give a short account of the iron-ore deposits of India. What are the raw materials for the manufacture of iron and steel? Indicate the injurious ingredients in them and the limits allowable.

10. A copper-gold deposit could be worked at the rate of 1,000 tons per day for a period of thirty years with an investment of a crore of rupees towards machinery, erection, and other costs. Taking 300 working days in the year, the recovery of metallic copper at 3%, gold at 5 oz. per ton of metallic copper, the cost of reduction at Re. 1 per ton of ore, the cost of extraction of gold from copper at Rs. 80 per ton of copper, Rs. 35 as the price per cwt. of copper, Rs. 80 as the price per ounce of gold, and allowing two years' 'deferment' for installation of machinery when there would be no income, calculate the present value of the property if 20% per annum is allowed to the purchaser and 3% per annum towards redemption of capital.

## SECOND PAPER

*The questions are of equal value*

*Answer FIVE questions, at least TWO from EACH group*

### GROUP A

1. Describe the chemical composition and the laws of twinning of the feldspars.
2. Give an account of Haüy's conception of crystal structure. How did he explain the laws of constancy of angles and of rationality of indices? What are the difficulties of accepting his theory?
3. How would you determine the optic axial angle of a biaxial crystal? Give details.
4. Give an account of the various forms of free silica occurring in nature, and discuss the thermal relations of the silica minerals.

### GROUP B

5. Discuss the crystallization of the ternary system diopside-albite-anorthite.
6. Describe the process of carrying out the mechanical analysis of a sandy clay, and indicate the method of representing its composition by means of a graph.
7. Write notes on the following :—  
Enclave homoene, blastoporphyratic structure, Liesegang layers, Lemberg's test, and Sonstadt solution.
8. Discuss the nature and origin of : porphyritic structure, corona structure, reh, and aplite.

## THIRD PAPER

*The questions are of equal value*

ANY SIX questions may be attempted, at least THREE from EACH group

## GROUP A

1. Discuss the distribution of the Cretaceous rocks met with in Madras, Assam, and Burma. Give the sequence in each area; the type fossils recognized; the conditions of deposition; and briefly, the faunistic relationships as compared with each other.
2. Give as full an account as you can of the infratrappean rocks met with below the Deccan Traps of the lower Narbada valley, the Chanda district, and in the vicinity of Rajahmundry.
3. Give a brief summary of the geology of the Punjab Salt Range. Make particular reference to any differences in the succession of strata in the eastern and western areas.
4. Give a short account of the rocks of the Cuddapah and Kurnool formations in their type areas.
5. Discuss briefly the geology of *any one* of the following areas :—
  - (a) Rajputana.
  - (b) The Indo-Gangetic trough.
  - (c) Any area with which you are familiar as the result of personal mapping or field excursions.

## GROUP B

6. Describe a typical member of the genus *Pentremites*, illustrating your description by means of drawings and explaining the terms you employ.
7. Write a note on the factors which governed the separation of 'life-provinces' during past geological ages.
8. Define the following terms: protegulum; homotaxis; ontogeny; biogenetic law; madreporite; resilifer; trituberculy; orthogenesis.
9. Define the distinctive characters of the genera: *Syringothyris*, *Hyaspitherium*, *Rastrites*, *Trigonia*, *Pterichthys*, *Dinothierium*, *Hamites*, *Lyttonia*.
10. Name some of the leading genera of fossils occurring in each of the following stages: Fatehjang stage, Dhok Pathan stage, Umia series, Pondaung stage, Niniyur stage, Bugti beds. Give the exact stratigraphic horizon of these stages or series.

## FOURTH PAPER

## (IGNEOUS ROCKS)

*The questions are of equal value*

Only FIVE questions to be attempted

1. Explain Bowen's 'Reaction principle' in its effect on the nature of the rocks produced during the crystallization of a magma. Compare the types produced when reaction has full play with those produced when it is restricted.



2. Discuss the current ideas regarding the origin of alkali rocks.
3. Describe the petrology of the Deccan traps and of the associated types of igneous rocks.
4. Explain the term 'pegmatite' as used in its widest sense. Describe the geology and mineralogy of a pegmatitic region in India.
5. Describe the chief types of ultrabasic igneous rocks, and discuss their origin.
6. Explain the following terms : Magmatic stoping, Anatexis, Autometamorphism, Orbicular granite, and Pneumatolysis.
7. Describe the modes of occurrence of igneous rocks and their relationship with the country rocks. Indicate which types are prevalent in the intrusive and extrusive phases and in what geological ages.
8. Describe *any six* of the following rock types :—  
Phonolite, Tephrite, Essexite Eclogite, Laurovikite, Kersantite, Pitchstone, Limburgite.

## (COAL)

*The questions are of equal value*

*Answer ANY SIX questions*

1. State how you would proceed to make a section of coal for microscopic investigation by transmitted as well as by reflected light.
2. Write an essay on utilization of pulverized coal as fuel. Are there any instances of pulverized coal being utilized in India? What do you think of the commercial success of this industry in India?
3. What are the important properties of metallurgical coke suitable for blast furnaces? What is Natural coke and how is it produced? Give some Indian examples.  
Give a short account of any bye-product recovery even you have seen
4. Give a short account of the Jharia coal-field.
5. Discuss the influence of phosphorus in coke used for iron ore smelting. What is the origin of phosphorus in the seams of the Giridih and Damuda valley coal-fields? How would you search for low phosphorus coals in these coal-fields?
6. Give a summary of the mode of formation of the coal seams in the Damuda strata of the coal-fields of Bengal and Behar, stating the conditions of deposition and the chemical or bacteriological processes which are thought to have taken place.
7. Enumerate briefly how you would proceed to make a proximate analysis of a sample of coal.
8. What do you understand by Hilt's Law? Give proximate analyses of the coal from four seams in the Jharia coal-field to illustrate the meaning of the above law.

## ANTHROPOLOGY

## INTERNAL EXAMINERS

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 „ HIMADRIKUMAR MOOKERJEE, D.Sc., D.I.C.  
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 DR. BIRAJASANKAR GUPTA, M.A., PH.D.  
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 MR. NANIGOPAL MAJUMDAR, M.A.  
 RAI BAHADUR SARATCHANDRA RAY, M.A.  
 SIR NILRATAN SIRCAR, KT., M.A., M.D., LL.D., D.C.L.  
 RAI BAHADUR RAMAPRASAD CHANDA, B.A.

## FIRST PAPER

*The questions are of equal value*

*THREE questions are to be answered from EACH half*

## FIRST HALF

1. Describe the human molars, and state how each of them differs from the corresponding tooth in the chimpanzee and the macacus.
2. Briefly describe the evolution of the higher apes during the Tertiary period.
3. Give a short description of the gibbon under the following heads : (a) cranial characters. (b) the arrangement of the hair tracts.
4. Enumerate the morphological characters of the Primates.
5. How would you proceed to ascertain the approximate age of a human skull?

## SECOND HALF

1. Discuss the resemblances between the crania of the Pithecanthropus Erectus and the Sinanthropus.
2. Compare the lower jaw of the Piltdown find with that of a modern man and of a chimpanzee. Comment on its affinities.
3. Write short notes on :—  
 (a) The Talgai Skull.  
 (b) The Boskop Cranium.
4. Write an essay on 'The origin and distribution of Neanderthal man'.  
 Or,  
 5. Write a short dissertation on 'The Azilian Races'.

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Write a short essay on the Brachycephalisation of Europe, and discuss the causes that have led to it.
2. What are the somatic characters of the Plynlymon people? What are their racial affinities, and how do you account for their presence in Great Britain?
3. What are the racial types among the Chinese? Can they be regarded as a homogeneous race?
4. Give an account of the racial anthropology of Arabia. How was it influenced by racial migrations from other parts of the neighbouring countries?
5. Who are the Touaregs? What do you know of their racial affinities?
6. Give a short description of the races that inhabited the Indus Valley in the third millennium B.C.

## SECOND HALF

*Answer ANY THREE questions*

1. Discuss the anthropological history of the British Isles.
2. Describe the somatic characters of the Half-Hamites; discuss their origin and distribution.
3. Show the distribution of the long-headed types in the aboriginal people of America, indicating the probable lines of migration.
4. Attempt a racial classification of the inhabitants of the province of Bengal as at present constituted, indicating with what peoples inside and outside India each of the types possesses an affinity.
5. Describe the racial elements making up the people of Melanesia.
6. Write ethnical notes on *any six* of the following peoples :—  
Basque, Bushman, Kadir, Tehuelche, Semang, Nilote, Tungus, Maya.

## THIRD PAPER

*The questions are of equal value**Only SIX questions are to be attempted*

1. Describe the Paleolithic cultures of Egypt and China. Discuss their similarities with Indian prehistoric types, if any.
2. Could you describe the stone implements that would likely be associated with the Eoanthropus and Sinanthropus?
3. What inferences could you draw of the religious beliefs and practices of the Chancelade, Grimaldi, and Cro-magnon peoples from a study of their contemporary cultures in Europe?
4. Briefly describe the Ancyclus and Littorina phases and their bearing on the stone cultures of Western Europe.
5. Write a short sketch on the various types of megaliths in India, bringing out the distribution of the dolmen and its likely origin.
6. Describe briefly the Bronze age cultural areas in Southern, Central, and Western Europe.

7. Describe the potteries of Mohen-jo-Daro. Compare and contrast them with Anau and Susa pottery.
  8. How far would you consider Indus-valley culture to be an independent local growth from its material culture, religious beliefs, and ethnic composition?
  9. Discuss the origin of the wheel and its various applications.
  10. Write an essay on the origin and development of agriculture.
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#### FOURTH PAPER

*The questions are of equal value*

*Only THREE questions are to be attempted from EACH half*

##### FIRST HALF

1. Write an essay on the 'Culture Area' concept, bringing out the main characteristics of some culture-areas.
2. Give a full account of the 'Dual Organization,' its probable modes of origin, and the forms it has assumed.
3. Write an essay on the 'Taboo,' with special reference to the notion underlying it, and describe the different classes of taboos, their characteristics, objects, and sanctions. Illustrate your statements by Indian examples as far as possible.
4. Write a paper on the Initiation ceremonies of the adolescent, giving illustrations from at least two primitive tribes.
5. Discuss the different theories of the origin of marriage.

##### SECOND HALF

1. What is *naturism*? How far, in your opinion, does it explain the origin of religion?
  2. Give a critical estimate of Durkheim's contention that totemism forms the earliest form of religion.
  3. Indicate in brief outline the basic characteristics of the religious beliefs and practices of any two of the following tribes: (1) Crow Indians, (2) Ekois, (3) Khasis, (4) Old Kukis, (5) Bukaus.
  4. How do you account for cultural similarities in continuous as well as discontinuous areas? Illustrate your answer with Indian examples as far as possible.
  5. Write short notes on the following: (a) *mana* concept, (b) levirate, (c) junior-right and collateral inheritance.
- 

#### (GROUP B)

#### FIFTH PAPER

*The questions are of equal value*

##### FIRST HALF

*Only THREE questions are to be attempted*

1. Discuss briefly the probable origins of exogamy according to Seligmann.
2. What is cross-cousin marriage? Does this system affect the kinship terminology of a people? Give examples from India.

3. What is the psychological relation of a father to his son in a matrilineal society ?
4. How is contact of peoples likely to affect marriage-rules ?
5. Explain fully the ideas underlying ' culture-area ' and ' culture-centre ' comparing them with the ' culture-strata ' theory of the German school.
6. How far is Freud's assumption of a primitive horde with actual parricide justified ?

## SECOND HALF

*Answer ANY THREE of the six questions*

1. What is meant by ' Herd Instinct ' ? Are there reasons to assume that it is more developed in primitive man ?
2. Indicate the difference between descriptive and classificatory kinship nomenclatures. State how this is due to the different forms of early marriage.
3. Examine the economic life of any primitive people in the light of division of labour.
4. What is couvade ? Give an account of the theories that have been advanced to account for it.
5. Define Totemism, and consider its general influence on the primitive peoples of Bengal and Assam.
6. Give an account of Tylor's theory of Animism. In what form does animism survive in India ?

## SIXTH PAPER

*The questions are of equal value*

### FIRST HALF

*Answer ANY THREE of the following questions*

1. Discuss the traditional routes of migration of the Santals and try to identify the places mentioned in them.
2. Determine the racial and cultural affinity of the Santals with the other Kherwari-speaking tribes of Chota Nagpur and Orissa.
3. Give a comparative estimate of the social organization of the Santals and their nearest congeners.
4. Indicate the position of women in Santal Society.
5. Write short comparative notes on at least three such articles that are believed to remove pollution or impart sanctity among the Santals.

### SECOND HALF

*Answer ANY THREE of the following questions*

1. Give examples of the influence of civilization on primitive peoples, and discuss the value or otherwise of the influence.
2. Describe the village systems of the Santals, how a village is founded, built, and ruled.
3. What are the beliefs of the Santals as regards a Supreme Being and the spirits, and how do these beliefs influence their social and individual life ?
4. What is a Santal *ojha* ? How does a Santal become an *ojha*, and how does an *ojha* practise ?

5. What constitutes marriage among the Santals ? What is the position of a husband and his relatives in connection with his wife ?

6. Language adopt words from each other. What does this signify ? Give some examples of such borrowing in the Munḍa languages, and state what may be deducted as to cultural development in connection with names of domesticated animals and handicrafts.

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(GROUP C)

FIFTH PAPER

*The questions are of equal value*

*Only THREE questions are to be attempted from EACH half*

FIRST HALF

1. Give a short account of the religion of the Vedic period, with special reference to the principal gods and the mode of worshipping them.
2. Give an account of the popular beliefs and superstitions which you find in the Jātakas or in the Arthaśāstra.
3. Discuss the rise of the Bhāgavata religion, and indicate its principal features.
4. Distinguish the popular religion of India from the higher philosophical systems.
5. Write critical notes on any three of the following :—
  - (a) Siva in Vedic and Pauranic literatures ;
  - (b) Relation between Tantra and Mahāyāna ;
  - (c) Belief in evil spirits and their propitiation ;
  - (d) The Worship of Tārā ;
  - (e) Influence of foreign races on the Bhāgavata religion.

SECOND HALF

1. Write a short account of the spread of Buddhism, indicating, if possible, the reasons of its ready acceptance amongst Mongoloid peoples.
  2. What would you consider to be the principal characteristics of Jainism ? Wherein lay its special appeal to the merchant-classes ?
  3. How far would you consider the Sikh religion to be an attempt at a synthesis resulting from Hindu-Islamic culture-contact ?
  4. Give instances from the folk-religion of Bengal of the attempt to appeal both to Hindus and Muhammadans.
  5. Give a short sketch of the new religious movements in India as a result of the impact of Western civilization.
  6. Analyse the main features of the Durga puja in Bengal, bringing out the survival and transformation of primitive traits therein.
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## SIXTH PAPER

*The questions are of equal value*

*Answer ANY SIX questions*

1. What in your opinion was the origin of caste in India ? Discuss the theories of Ibbetson, Nesfield, Senart, and Chanda.
2. Describe the peculiar characters of the types of polyandry prevalent in India at the present day. Is there any evidence to show that any form of it was in vogue in Ancient India among the higher castes ?
3. Can you indicate any ceremonies in which the marriage ritual of the Hindus agrees with that of any of the European branches of the Aryan people ?
4. How far is widow-marriage prevalent in India among the non-primitive Hindus ? What was the attitude towards it in ancient times ?
5. Is it permissible for a Hindu girl to seek out a husband for herself ? How far do you think was *Strayamtrara* a self-choice for the bride herself ?
6. Describe the constitution and functions of the caste panchayet.
7. Discuss the influences that are disintegrating the Indian village as a self-contained industrial unit and thus breaking down the solidarity of village life.
8. Gait observes that the proportion of females is lower in India than in Western Europe. Investigate the probable reasons.
9. Write notes on the following :—  
 Snātaka ; Maru-Makattāyam ; Vṛātya ; female infanticide ;  
 Pañcha-Mahāyajña.

— — —

# Diploma Examination in Spoken English

1933

EXAMINERS

(WRITTEN)

PROF. SUNITI KUMAR CHATTERJI, M.A., D.LIT. (LOND.)

„ J. W. HOLME, M.A.

(ORAL)

MR. J. W. HOLME, M.A.

REV. C. S. MILFORD, M.A. (OXON.)

## ORAL EXAMINATION PAPER

*(To be circulated to candidates before the examination)*

(b) Passages for Recitation :—

1. The science of politics bears in one respect a close analogy to the science of mechanics. The mathematician can easily demonstrate that a certain power, applied by means of a certain lever or of a certain system of pulleys, will suffice to raise a certain weight. But his demonstration proceeds on the supposition that the machinery is such as no load will bend or break. If the engineer, who has to lift a great mass of real granite by the instrumentality of real timber and hemp, should absolutely rely on the propositions which he finds in treatises on Dynamics, and should make no allowance for the imperfection of his materials, his whole apparatus of beams, wheels and ropes would soon come down in ruin, and, with all his geometrical skill, he could be found a far inferior builder to those painted barbarians, who, though they never heard of the parallelogram of forces, managed to pile up Stonehenge.

MACAULAY.

2.

Season of mists and mellow fruitfulness,  
Close bosom—friend of the maturing sun ;  
Conspiring with him how to load and bless  
With fruit the vines that round the thatch-eaves run ;  
To bend with apples the mossed cottage-trees,  
And fill all fruit with ripeness to the core ;  
To swell the gourd, and plump the hazel-shells  
With a sweet kernel ; to set budding more,  
And still more, later flowers for the bees,  
Until they think warm days will never cease,  
For summer has o'erbrimmed their clammy cells.

Who hath not seen thee oft amid thy store ?  
Sometimes whoever seeks abroad may find  
Thee sitting careless on a granary floor,  
Thy hair soft-lifted by the winnowing wind ;  
Or on a half-reaped furrow sound asleep,  
Drowsed with the fume of poppies, while thy hook  
Spares the next swath and all its twined flowers ;  
And sometimes like a gleaner thou dost keep  
Steady thy laden head across a brook ;  
Or by a cider press, with patient look,  
Thou watchest the last oozings hours by hours.

KEATS.



3.               Strew on her roses, roses,  
                   And never a spray of yew !  
                   In quiet she reposes;  
                   Ah, would that I did too !
- Her mirth the world required;  
                   She bathed it in smiles of glee.  
                   But her heart was tired, tired,  
                   And now they let her be.
- Her life was turning, turning,  
                   In mazes of heat and sound.  
                   But for peace her heart was yearning,  
                   And now peace laps her round.
- Her cabin'd ample spirit,  
                   It flutter'd and failed for breath.  
                   But now she doth inherit  
                   The vasty halls of death.

MATTHEW ARNOLD.

(d) A short speech to be made by the candidates on one or other of the following subjects :

1. A plea for the abolition of Capital Punishment.
2. The importance of classical studies in education.

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## WRITTEN EXAMINATION PAPER

*The figures in the margin indicate full marks*

*Answer six questions only from among Questions Nos. 1-9 (OR Question No. 10 and FOUR others from among Questions Nos. 1-9) AND Question No. 11, which is compulsory.*

1. Describe the action of the vocal chords in speaking. What are the 16 speech-sounds produced in the glottal region? Describe them in detail.
2. Explain how the lips influence the production of both vowel and 16 consonant sounds.
3. Explain five of the following, with illustrative examples wherever 16 required: *Pharynx; Epiglottis; Velar Sounds; Velarised Sounds; Clicks; Retroflex Sounds; Lateral Sounds; Affricates; Fricatives; the Neutral Vowel; Stop Sounds; Dark 'l'.*
4. Describe fully the formation of five of the following sounds, using 16 diagrams wherever necessary :—  
                   [ θ ], [ ŋ ], [ ɪ ], [ ʊ ], [ x ], [ j ], [ ʀ ], [ æ ], [ ʒ ],  
                   [ ʧ ], [ ɑ ], [ a ].
5. Explain the theory of 'Cardinal Vowels', and draw the Cardinal 16 Vowel Figure with the English vowel sounds indicated in their proper places.

Or,

Tabulate the vowel sounds of English, giving keywords, and comment on the nature of each sound.

6. Write notes on *Vowel-length* and *Accent* in English. 16
7. Characterise the various kinds of English pronunciation you know. 16  
What do you understand by 'Standard English'? What kind of English pronunciation a foreign speaker should try to acquire?
8. Transcribe phonetically (using the alphabet of the *International Phonetic Association*) the following passage, indicating the pronunciation you are attempting to reproduce :— 16

*In writing this grammar we have kept steadily in view the class of students for whom the series of grammars was originally planned. As it is not intended for specialists, some details of more or less importance have been intentionally omitted, but we venture to think that the present volume contains all that the ordinary students will require to know about the subject. The student who thoroughly masters the book will not only have gained a comprehensive knowledge of Old English, but will also have acquired the elements of comparative Germanic grammar.*

9. Discuss the evolution of four of the following sounds of Modern Standard English :— 16

[ ʃ ], [ tʃ ], [ dʒ ], [ ou ], [ i : ], [ æ ], [ ɔ : ], [ f ].

10. What are the usual defects of Bengali (or other Indian) pronunciation of English? How would you correct them? 32

Or,

Institute a comparison between the sound-system of English and that of Bengali (indicating the kind of Bengali pronunciation treated).

11. Draw a sketch of the inside of the mouth with the vocal organs, indicating the uvula and the teethridge. 4

# Preliminary Examination in Law

February, 1933

## JURISPRUDENCE

*Paper-Setters*—{ MR. SITARAM BANERJEE, M.A., B.L.  
DR. S. C. BAGCHI, LL.B., LL.D.

*The questions are of equal value*

### FIRST HALF

*Examiners*—{ MR. SITARAM BANERJEE, M.A., B.L.  
,, AMIN AHMED CHAUDHURI, M.A., LL.B.,  
BARRISTER AT-LAW.  
,, M. N. MITTER, BARRISTER-AT-LAW.

*Answer ANY FIVE of the following, of which the FIRST question must be one*

1. Write a short thesis on 'positive law', distinguishing it from other kinds of law with which you are familiar.  
Is Hindu Law as administered in India positive law? Discuss.
2. 'Jurisprudence is not a science of legal relations *a priori* but is abstracted *a posteriori* from such relations as have been clothed with a legal character in actual systems.' Develop and explain with illustrative examples.
3. 'Apart from the existence of a State, and of a Sovereign Power within it, there can be no Law.' Explain and expand the idea with examples.
4. What is your idea of 'Equity'? Examine the claims of 'Equity' to be a source of law.
5. Write a note on 'negligence' as a factor in civil and criminal liability.
6. Define a 'juristic act'. In order to produce a 'juristic' act is it necessary that the will and its expression must be in correspondence? Discuss fully with illustrations.
7. Explain, with illustrations, *any two* of the following :—  
(a) Right, (b) Sovereignty, (c) Artificial person, (d) Acts, (e) Contributory negligence.

### SECOND HALF

*Examiners*—{ MR. ANNADACHARAN KARKOON, M.A., B.L.  
,, S. D. BANERJEE, M.A., B.L.  
,, PRAKASCHANDRA MULLICK, M.A., B.L.

*Answer ANY FIVE, of which the FIRST question must be one*

1. Modern International Law is said to be based upon Jus Naturale. Fully examine the statement.
2. Explain the difference between a 'private right' and a 'public right'. Enumerate some acts which may infringe both the rights.

3. Examine the claims of the theory of 'Social Contract' as providing an explanation of the creation of a State.

4. 'The progress of Society is from Status to Contract.' Explain and illustrate.

5. 'Proprietary rights are extensions of the power of a person over portions of the physical world.' Explain with special reference to the acquisition and extinction of those rights.

6. A contract may be regarded as 'taking of a risk'. Expound fully, with illustrations, the underlying idea.

7. What is your idea of a 'crime'? Distinguish a 'crime' from a 'tort' in all its aspects.

## ROMAN LAW AND PRINCIPLES OF LEGISLATION

*Paper-Setters*— { MR. H. D. ROSE, M.A., BARRISTER-AT-LAW.  
,, RUPENDRAKUMAR MITRA, M.Sc., M.L.

*The figures in the margin indicate full marks*

*FIVE questions only in EACH half to be attempted*

### FIRST HALF

*Examiners*— { DR. ASVINIKUMAR CHAUDHURI, B.A., LL.B.,  
,, L.L.D., BARRISTER-AT-LAW.  
MR. HEMENDRANARAYAN BHATTACHARYYA, M.A., M.L.  
,, JAJNESWAR MAJUMDAR, M.A., M.L.

1. 'It sometimes happens that children who at their birth were not in the power of their father are brought under it afterwards.' (*Justinian*.) Describe the methods by which this was done. 10

2. Give a short account of the Roman Law of guardianship. 10

3. '*Usus* is to *co-emptio* what *usucapio* is to *mancipatio*.' Explain. 10

4. Write short notes on :— 10

(a) *occupatio*,  
and (b) *hypothec*.

5. Write a short essay on the Roman Law of servitudes. 10

6. Briefly summarise the rules of Roman Law relating to wills intended for the protection of the family. You are required also to notice the changes introduced by Justinian. 10

7. Write a short note on *peculium*. 10

### SECOND HALF

*Examiners*— { DR. MOHINIMOHAN BHATTACHARYYA, M.A., B.L.,  
,, PH.D.  
MR. S. C. CHAUDHURI, M.A., LL.B.,  
,, BARRISTER-AT-LAW.  
,, S. N. BHATTACHARYYA, B.A.,  
,, BARRISTER-AT-LAW.

1. Write a short note on the scope of *Lex Aquilia*. 10

2. If a man kills a slave whom he owns in common with others, what is his liability to his co-sharers? 10

3. Had a person *sui juris* any remedy under the Lex Aquilia for injury 10  
done to (a) his own person, (b) to the person of his son under *potestas*?
4. A man kills one of a pair of horses, the one that was the favourite. 10  
Enunciate the principles on which damages were assessed by the Romans.
5. Write a short note on legal fictions, bringing forth by means of 10  
illustrations taken from the Roman system the part played by them in  
the development of law.
6. Estimate the importance of Roman consensual contracts in the 10  
history of contract-law.
7. 'Intestate inheritance is a more ancient institution than testa- 10  
mentary succession.' Discuss.

## HINDU LAW

*Paper Setters*—{ DR. BIJANKUMAR MUKHERJEE, M.A., D.L.  
MR. RISHINDRANATH SARKAR, M.A., B.L.

*The questions are of equal value*

### FIRST HALF

*Examiners*—{ MR. JYOTIPRASAD SARBADHIKARI, M.A., B.L.  
,, RAMESCHANDRA PAL, M.A., M.L.  
,, SACHINDRANATH MUKHERJEE, M.A., B.L.

1. Define the following terms :—  
Days, Partition, Bandhu, Pinda, and Factum Valet.
2. Give a brief history of the sources of Hindu Law.

*Or,*

Trace the origin of the present state of the caste system, with special reference to Hindu Law on marriage and adoption.

3. State the facts and decision in *Brij Narain v. Mangal Prasad* (46 A. 95).
  4. A Hindu dies leaving behind him his mother, widow, two sons, three grandsons by a predeceased son, a maiden daughter. State the amount of the share each will get, if entitled to inherit, both under the Dayabhaga and Mitakshara law.
  5. Discuss the principles laid down in the case of *Ramchandra v. Vinayaka* (42 I.A. 290).
- A, a Hindu, is, on his mother's side, sixth degree in descent from the common ancestor of his and a deceased proprietor B. Can A's son be an heir to B?

*Or,*

Discuss the points of difference between the Mitakshara and Dayabhaga relating to the order of succession. What changes have been made by recent enactments ?

### SECOND HALF

*Examiners*—{ MR. SATYENDRANATH MITTER, B.L.  
,, UPENDRAKUMAR RAY, M.A., B.L.  
,, B. N. DATTARAY, M.A., B.L.,

BARRISTER-AT-LAW.

1. Who are the members of a Hindu Joint Family ? What are their respective rights and liabilities with regard to the joint family property and its management ?

2. Discuss how far adoption operates as civil death.

Or,

State the facts and decision in *Manikyamala v. Nanda Lal* (39 Cal. 1906).

3. Who are excluded from inheritance according to Hindu Law ? Are they entitled to maintenance ?

Or,

State the effect of migration of a Hindu from one place to another where a different school of Hindu Law prevails.

4. Enumerate the various forms of marriage under Hindu Law. What is the effect of a marriage under a Special Marriage Act on the Hindu Law of adoption and succession ?

5. Discuss the circumstances under which a Hindu widow can make a valid surrender of her husband's estate in favour of the next reversioner.

Or,

How far is a compromise entered into by a Hindu binding on the reversioner after her death ?

## CONSTITUTIONAL LAW

*Paper Setters*—{ Mr. C. C. BISWAS, C.I.E., M.A., B.L., M.L.A.  
 „ PRAMATHANATH BANERJEE, M.A., B.L.,  
 BARRISTER-AT-LAW.

*The questions are of equal value.*

N.B.—Candidates are permitted to answer TEN questions in ALL FIVE from the FIRST HALF and FIVE from the SECOND HALF. Credit will be given for reference to leading cases.

### FIRST HALF

*Examiners*—{ Mr. P. N. BANERJEE, M.A., B.L.,  
 BARRISTER-AT-LAW.  
 „ A. S. M. LATIFUR RAHAMAN, B.A., LL.B.,  
 BARRISTER-AT-LAW.  
 { DR. SANTIBHUSHAN DUTT, M.A., PH.D.,  
 BARRISTER-AT-LAW.

*Five questions only to be attempted*

1. Enumerate Parliamentary privileges in England. Can the Courts in England adjudicate on them ? If so, to what extent ?

2. How far do the Judges interpret the Constitution in (i) England, (ii) India, (iii) the U. S. A. ?

3. Explain the following :—

(a) The Common Pleas are not to follow the King's Court, but are to be held in a fixed spot. (*The Magna Charta.*)

(b) No dispensation by non obstante to any statute or part thereof in future be allowed except in so far as permitted by statute.  
 (*The Bill of Rights.*)



12. How can a foreigner be naturalised in (i) England, (ii) India ? Does a naturalised citizen in England enjoy all the privileges of a natural born citizen ?

13. Discuss the principles of law laid down in *Ex parte D. F. Marais*, (1902) A. C. 109.

14. Write notes on any two of the following :—

(a) *Attorney General v. De Keyser's Royal Hotel*, (1920) A.C. 508.

(b) *Seven Bishops' Case*, 12 St. Tr. 183.

(c) *In re Stallman*, 1. L. R. 39. Cal. 164.

(d) *Bradlaugh v. Gossett*, (1884) 12 Q.B.D. 271.

Or,

Discuss any two of the following :—

(a) A soldier while dispersing a non-violent mob kills a man. Is he liable under the law ?

(b) X commits a political offence in British India and runs away to (a) French Chandernagore, (b) Nepal. Advise the Crown as to how to secure his arrest and trial.

(c) Can the Crown acquire B's properties in Calcutta in (i) time of peace, (ii) in time of war, without compensation ?

(d) X, the Governor of crown colony, commits an assault on A within the colony. Can he be tried in the courts of the colony ?

## August, 1933

### JURISPRUDENCE

#### FIRST PAPER

*Paper-Setters*— { Mr. S. C. BAGCHI, B.A., I.L.B., LL.D.,  
BARISTER-AT-LAW.  
,, SITARAM BANERJEE, M.A., B.L.

*The questions are of equal value*

#### FIRST HALF

*Examiners*— { Mr. S. N. BHATTACHARYYA, B.A., BARRISTER-AT-LAW  
,, AMIN AHMED CHAUDHURI, M.A., LL.B.,  
BARRISTER-AT-LAW.  
,, M. N. MITTER, M.A., B.L., BARRISTER-AT-LAW.

*Attempt ANY FIVE of the following of which the FIRST question must be one*

1. 'Jurisprudence in the formal science of positive Law.' Explain and criticize.

2. Write a short thesis on 'Customary Law.'

3. Define 'Sovereignty' and distinguish between political and legal sovereignty.

4. Define 'International Law.' Do you consider it to be law proper? Discuss.

5. Define and classify legal rights. Give examples

6. 'Every wrong has its remedy.' Explain and discuss.

7. What are the elements of 'legal possession'? Why is it that possession is allowed to ripen into title?



## SECOND HALF

Examiners— { Mr. S. M. BOSE (Sr.), M.A., M.L.C., BARRISTER-AT-LAW.  
 ,, SITARAM BANERJEE, M.A., B.L.  
 ,, ABUL QUASEEM, B.A., LL.B., BARRISTER-AT-LAW.

*Attempt ANY FIVE of the following of which the FIRST question must be one*

1. Write a note on the doctrine of primogeniture as developed by Sir Henry Maine.
2. 'Society progresses from Status to Contract.' Explain and discuss.
3. Write a short history of testamentary succession in Ancient Law.
4. 'Write a note on the doctrine of 'Contributory Negligence.' Illustrate your answer.
5. 'A contract is the taking of a risk.' Explain and discuss.
6. How far was the distinction between crime and tort recognised in ancient law?
7. Define the following :—  
 (a) Juristic person, (b) fact, (c) equity, (d) title, (e) adjective law.

## ROMAN LAW AND PRINCIPLES OF LEGISLATION

## SECOND PAPER

Paper-Setters— { DR. BIJANKUMAR MOOKERJEE, M.A., D.L.  
 ,, RADHABINOD PAL, M.A., D.L.

## FIRST HALF

Examiners— { DR. A. CHAUDHURI, B.A., LL.B., LL.D.,  
 BARRISTER-AT-LAW.  
 { MR. JAJNESWAR MAJUMDAR, M.A., M.L.  
 { ,, SARATCHANDRA LAHIRI, M.A., B.L.

*The figures in the margin indicate full marks*

*Only FIVE questions are to be answered*

1. Slavery is defined by Justinian as 'the condition of being under somebody's complete power.' 10  
 Examine if this definition covers all cases of slavery.
2. Give a short account of the privileges based on the private *jus* 10  
*quiritium*.
3. Briefly give the history of the law relating to person and property 10  
 of *filius familias* in the Roman system.
4. Explain the Roman conception of 'ownership,' and state the various 10  
 modes of acquisition of property recognized by the Roman law.
5. Give the essential conditions for the operation of 'usucapio.' 10
6. Write short notes on any three of the following :— 10  
 (i) Depositum; (ii) Mutuum; (iii) Emptio venditio; (iv) Mandatum.

7. Give a short sketch of the rules of intestate succession to a free born person— 10

(a) in the XII Tables; (b) under the Praetor's Edicts.

8. Explain briefly the nature of the changes effected in the Roman Law of Procedure by the introduction of the *formularly* and the *extraordinary systems*. 10

### SECOND HALF

Examiners—{ Mr. S. C. CHAUDHURI, M.A., LL.B., BARRISTER-AT-LAW.  
 „ P. MITTER, BARRISTER-AT-LAW.  
 „ RAMESCHANDRA PAL, M.A., M.L.

*The questions are of equal value*

*Only FIVE questions are to be answered*

1. 'The theory of a set of legal principles entitled by their intrinsic superiority to supersede the older law, very early obtained currency both in the Roman State and in England' (Maine).

Trace the development of this theory in the Roman system.

2. Discuss how far 'early Roman law was based on the religious cult of the family.'

3. Discuss Maine's theory of the origin of property.

4. Give a short account of the historical alliance traced by Maine between contracts and conveyances.

5. Discuss the origin and scope of Lex Aquilia.

6. Discuss the question of A's liability under the Lex Aquilia in the following cases :—

(a) A's bull gores B's slave to death.

(b) A kills his own slave which was pledged to B.

(c) A knocks money out of B's hands into a river which is thus lost.

7. Distinguish between the delicts of *Injuria* and *Damnum Injuria Datum*.

8. Give a short account of the development of the Lex Aquilia by *Actio utilis*.

### HINDU LAW

#### THIRD PAPER

Paper-Setters—{ Mr. C. C. BISWAS, C.I.E., M.A., B.L.  
 „ RUPENDRAKUMAR MITRA, M.Sc., M.L.

*The questions are of equal value*

*FIVE questions only in each half to be attempted, but your choice must include Questions Nos. 6 and 7*

#### FIRST HALF

Examiners—{ Mr. SANTOSHKUMAR PAL, M.A., B.L.  
 „ TARAKESWARNATH MITRA, M.A., B.L.  
 „ SUBODICHANDRA SEN, M.A., B.L.

1. Discuss the validity of ante-adoption agreements curtailing the rights of the adopted son in his adoptive father's estate.

2. Explain the text : ' A fact cannot be altered by hundred texts '. You are to illustrate your answer from a leading case.

3. Give a short summary of the reasons that Vignaneswara advanced for maintaining that ' wealth of the father becomes the property of the sons by birth alone '.

4. State the facts and the principles formulated in *Shyamacharn Chattopadhyay* against *Sricharn Chattopadhyay* (I. L. R. 56 Cal. 1135).

5. Explain the principles of succession to Impartible Estates belonging to a Mitakshara family. What is the test of separation in such a case ?

6. A widowed mother gives one of her sons *S* in adoption. Her husband had left considerable properties. After adoption the natural brothers of *S* claim the whole of their father's estate. Can *S* retain any part of it?

7. *A*, a Hindu governed by the Bengal school, dies intestate leaving him surviving a widow *W* and a minor son *S* aged eight years. He leaves properties of considerable value and no debts. *W* takes up the management as natural guardian of her son *S*, but finds it troublesome to manage the said properties. In the course of her management for four years she finds that with all her efforts she cannot get an outturn exceeding  $2\frac{1}{2}$  per cent. per annum. The collections were made always in time to meet public demands. At this time the Government floats an income tax free loan, carrying interest at 6% per annum. *W*, on the representation that she would invest in the said loan, sells half the estate to *P* at one lac of rupees, its proper price being only Rs. 80,000. *P* takes care to see that *W* invests the whole of the price paid in the said loan and in fact it is so invested. On attaining majority, *S* sues *P* for recovery of the property sold. What is your opinion? State reasons.

## SECOND HALF

Examiners—{ MR. SATYENDRAKISOR GHOSH, M.A., B.L.  
 ,, PRAMODAKUMAR GHOSH, M.A., B.L.  
 K. C. MOOKERJEE, B.L.

1. Define the scope of the doctrine of spiritual benefit in matters of succession and inheritance under the Mitakshara school.

2. Write a short note on ' Widow's Estate. '

3. State the principles formulated in *Rangaswami* against *Nachiappa* (L.R. 46 I.A. 72).

4. ' The liability to maintain a female relation by marriage is sometimes moral and sometimes legal, and when legal sometimes absolute and sometimes dependant on possession of property. '

Explain and illustrate.

5. Explain the concept of ' antecedent debt, ' and note its importance in Hindu Law.

6. *G* dies intestate and childless. He belonged to the Bengal school. He leaves behind a young widow and a needy sister's son *S* of middle age, who does not expect to survive the widow. While the widow is alive, *S* sells the maternal uncle's properties to *P* for Rs. 10,000, the fair price being Rs. 50,000. The price is fixed after great discussion and in the belief that the widow would live for a quarter of century more. A year after the purchase the widow dies of cholera. Thereafter, *S* demands Rs. 30,000 more from *P* with a threat, that otherwise he would not deliver to *P* possession of the properties which he managed to obtain on the widow's death. *P* comes to you. What advice would you give, and why?

7. *A*, a Hindu governed by the Bengal school, dies intestate leaving three sons and a widow *W*, being the mother of the said three sons. The sons start a business after their father's death, and in course of time become involved in debts, for securing which they, the sons, execute a mortgage in favour of one *M*. The mortgage comprises all the properties left by their father, which are four houses at Calcutta, the houses being of equal value. One of the houses so mortgaged is in Burrabazar. At the time of the mortgage the sons were joint and were living with their mother *W*. Five years after the mortgage one of the sons sues for partition, making his two brothers and mother parties defendants, but the mortgagee is not impleaded in the said suit. The suit is contested, and in the final decree the Burrabazar house is allotted to the mother *W*. The mortgagee, being ignorant of the decree passed in the partition suit, sues the sons for recovery of his mortgage money, gets a decree, and at the sale held in execution thereof buys all the properties mortgaged to him, but when he goes to take possession of the Burrabazar house is resisted by *W*. Discuss the merits of the cases of *M* and *W* in respect of the said house.

## CONSTITUTIONAL LAW

### FOURTH PAPER

*Paper-Setters*—{ MR. PRAMATHANATH BANERJEE, M.A., B.L.,  
BARRISTER-AT-LAW.  
SIR A. SUHRAWARDY, K.T., M.A., PH.D., D.LITT.

*The questions are of equal value*

*TEN questions in all to be attempted—FIVE from EACH half*

### FIRST HALF

*Examiners*—{ MR. UMAPRASAD MOOKERJEE, M.A., B.L.  
DR. SANTIBHUSHAN DUTT, M.A., PH.D.,  
BARRISTER-AT-LAW.  
MR. N. GOSWAMI, M.A., B.L., BARRISTER-AT-LAW.

1. Distinguish between sovereign and non-sovereign legislatures within the British Empire. In which category will you place the constitutions of (i) India, (ii) Canada, and why?

2. How far can the Magna Charta be regarded as 'the Bible of the English Constitution'?

3. Explain what is meant by the prerogative writs of (i) mandamus, (ii) certiorari. Are they available in India?

4. How can an alien become a British subject in (i) England, (ii) India? When he becomes a British subject, is his status the same as that of a natural born British subject?

5. Answer any two of the following:—

- (a) Can the Governor of Ceylon be tried before the Courts in Ceylon for (i) debts contracted by him in Ceylon, (ii) murder committed in Ceylon?
- (b) Can a Judge of a High Court in (i) England, (ii) India, be sued for damages for refusing to issue the writ of Habeas Corpus?

- (c) If a member of the Bengal Legislative Council makes a false and malicious charge against a Judge of the High Court of Calcutta, on the floor of the Council, do proceedings in contempt lie against him?

6. Discuss the principles of law laid down in either *Wise v. Dunning* (1902) 1 K. B. 167.

Or,

*In re Stallman*, 39 Cal. 164.

7. Distinguish between :—

- (a) a crown colony and a protectorate;  
(b) martial law and military law.

## SECOND HALF

Examiners— $\left\{ \begin{array}{l} \text{MR. JYOTIPRASAD SARVADHIKARI, M.A., B.L.} \\ \text{,, DWIJENDRA CH. GHOSE, B.L.,} \\ \text{BARRISTER-AT-LAW.} \\ \text{,, BIJANCHANDRA MITRA, B.L.,} \\ \text{BARRISTER-AT-LAW.} \end{array} \right.$

8. Write a short note on the Law of Treason in England.  
9. Have the servants of the Crown in (i) England, (ii) India, any remedies against the Crown for wrongful dismissal?  
10. What is the exact relationship between the Secretary of State for India and his Council? Can he under the present constitution interfere with the act of a Minister in a province?  
11. Why is the Writ of Habeas Corpus regarded as a bulwark of individual liberty in England? Is the writ available in India? If so, to what extent?  
12. How does the House of Commons exercise supervision and control over the finances in England?  
13. Answer any three of the following :—  
(a) Can the acts of the military authorities during martial law be challenged before Civil Courts after martial law is withdrawn?  
(b) What happens if a ministry defeated in the House of Commons does not resign?  
(c) Does the Writ of Habeas Corpus run into a crown colony? If so, under what circumstances?  
(d) Can the Governor-General in Council suspend the constitution of a province in India under the present constitution?  
14. What are the principles of law discussed in

either,

*Ex parte D. F. Marais* (1902), A.C. 109,

or,

*Darnell's Case*, 8 St. tr. 1?

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# Intermediate Examination in Law

February, 1933

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## MAHOMEDAN LAW AND LAW OF PERSONS

*Paper-Setters*— { SIR Z. R. ZAHID SUHRAWARDY, KT., M.A.,  
B.L., BARRISTER-AT-LAW.  
MR. AZIZUL HUQ, M.A., B.L., M.L.C.

*The questions are of equal value*

### FIRST HALF

*Examiners*— { SIR ABDULLA SUHRAWARDY, KT., M.A., PH.D.,  
D.LITT., BARRISTER-AT-LAW.  
MR. A. QUASEEM, B.L., LL.B., BARRISTER-AT-LAW.

*Only FIVE questions to be answered*

1. Discuss the place of custom as a source of Mahomedan Law, with special reference to its applicability to the Mussulmans of India. What are the conditions of a valid custom?

2. What are the rules and principles by which the Mahomedan Law is administered by the Indian Courts in cases of Muslims, and to what extent is it applicable? How far has legislation affected the applicability of the Mahomedan Law to the Mussulmans?

3. How are heirs classified in the Sunni and Shia systems of inheritance? Explain their respective rights and the general rules and principles governing succession.

4. (a) A Muslim woman dies, leaving her husband, daughter, father, and mother. Calculate their respective shares.

(b) A Muslim man dies, leaving mother, daughter, and son's daughter. Calculate their respective shares.

5. Discuss the Mahomedan Law of Gift as has been made applicable in India. How far can gifts be revoked?

6. What are the limitations to the power of a Mussulman to create a valid will? What is Marz-ul-Maut? What is the law regarding gift during Marz-ul-Maut?

7. Discuss the law of pre-emption, giving an outline of its general rules.

8. Discuss the law of wakf as at present applicable to British India.

## SECOND HALF

*Examiners*— { MR. M. A. ISPAHANI, M.A., BARRISTER-AT-LAW.  
 ,, AHMED ALI KHAN, BARRISTER-AT-LAW.

*Only five questions to be attempted*

1. Are Sikhs and Brahmos Hindus? Discuss, with reference to case law.
2. Discuss the maxim—the King can do no wrong. What remedy, if any, has a British subject when a wrong is done under King's authority, say, as regards a claim under breach of contract?
3. Discuss the law of allegiance. What are the disabilities of an alien?
4. What is the domicile of origin of a person? What is domicile of choice? Distinguish between the above two, and state their bearing on marriage.
5. Discuss the case of *Skinner v. Orde*.
6. Discuss the law of majority in English Law and in Indian Law. State the different ages of majority under different circumstances according to the Indian Majority Act.
7. Can a master dismiss his servant without notice? Discuss the law on the subject. What is the extent of the master's liability for the act of the servant?

## TRANSFER OF PROPERTY

*Paper-Setters*— { THE HON'BLE MR. JUSTICE A. K. RAY, M.A.,  
 B.L., BARRISTER-AT-LAW.  
 { MR. MANMATHANATH RAY, M.A., B.L.

*The questions are of equal value*

*Five questions only in each half to be attempted*

## FIRST HALF

*Examiners*— { MR. SANATKUMAR CHATTERJEE, M.Sc., B.L.  
 ,, SANTOSHKUMAR PAI, M.A., B.L.

1. State the definition of 'Notice' as given in the Transfer of Property Act after its amendment in 1929 along with the explanations relating to (i) notice through registered instrument; (ii) notice through possession; and (iii) notice through agent.
2. 'A transferee of property who takes an absolute interest cannot be restrained in his enjoyment or disposition of it by any condition inserted in the transfer.' Is there any exception to this general rule? Explain with illustrations.
3. State the rules in the Transfer of Property Act laying down the conditions under which interests can be created in favour of persons not in existence at the date of the transfer. State, assigning reasons, whether these rules now apply to the Hindus.

4. 'A person cannot accept and reject the same instrument.' Discuss, by reference to the provisions of the Transfer of Property Act.

5. State and discuss the rules as to (i) the validity of transfer by an ostensible owner, and (ii) the effect of the subsequent acquisition of interest in the property previously transferred by an unauthorised person.

6. A title suit is pending between A and B. C, a creditor of B, attaches the disputed property as belonging to B and gets it sold. D purchases the property without any notice of the litigation pending between A and B. A succeeds in getting a decree in the title suit. Will it affect the title of D, the auction-purchaser? Discuss.

7. Explain and enunciate the principles laid down in the leading case of *Jadunath v. Ruplal*, I.L.R. 38 Cal. 967.

## SECOND HALF

Examiners— { Mr. M. N. RAY, M.A., B.L.  
                  ,, MANINDRAKUMAR BOSE, M.A., B.L.

1. State and distinguish between the different types of mortgage so as to show the leading features of each.

Under what conditions has a mortgagee a right to sue for a personal decree against the mortgagor for the amount of the mortgage-money?

2. State and discuss the provisions of the present Transfer of Property Act, with reference to (i) subrogation, and (ii) priority, as between different mortgagees of the same property.

3. What are the rights of the mortgagee where the mortgaged property is sold owing to failure to pay arrears of revenue or rent, or where it is compulsorily acquired for a public purpose?

State what is meant by the marshalling of securities, explaining the circumstances in which such marshalling can be claimed.

4. Explain and enunciate the principles laid down in the leading case of *Noakes v. Rice* (1902), A.C. 24. How has this decision been modified by *G. C. Kreglinger v. New Patagonia Meat and Cold Storage Co.* (1914), A.C. 25?

5. State the modes in which a lease of immoveable property determines under the Transfer of Property Act.

A lease for manufacturing purposes commenced with the first day of January. The lessee has not received before the 1st July, 1932, any notice to quit. Up to what date is the lessee secure from being ejected by notice, there being no special contract, local law or usage, affecting the case?

6. A plot of land is sold for fifty rupees by an unregistered deed. The purchaser has already been in possession of the land as a lessee. Discuss the validity of the transaction.

State, giving reasons, whether (i) a lease of immoveable property, and (ii) a will, require registration.

7. What are the penalties attached to non-registration of an instrument required to be registered under the Indian Registration Act?

What advantages, if any, does a person secure in respect of his rights under a document by obtaining its registration in a case where the document is not one required to be registered?



## REAL PROPERTY AND SUCCESSION

*Paper-Setters*—{ MR. D. N. MITTER, B.Sc., LL.B.,  
BARRISTER-AT-LAW.  
,, RAMAPRASAD MOOKERJEE, M.A., B.L.

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiners*—{ MR. D. N. MITTER, B.Sc., LL.B.,  
BARRISTER-AT-LAW.  
,, RAMENDRAMOHAN MAJUMDAR, M.Sc., B.L.

*Answer ANY FIVE of the following questions*

1. 'What are the incidents of absolute ownership ? What is the distinction between Real and Personal property ? Is personal property synonymous with moveable property ?' 10
2. Explain any two of the following terms :— 10  
(a) Merger, (b) Livery of seisin, (c) Estate *pur autre vie*, (d) Equitable mortgage, (e) Hereditament.
3. What are the incidents of an estate in fee tail ? How can a base fee be converted into a fee simple ? 10
4. Explain (a) Remainder, (b) Reversion. State whether the law regarding Remainder is affected by the Law of Property Act, 1925. 10
5. What do you understand by (a) joint tenancy, (b) tenancy in common ? Is the law regarding severance of joint tenancy affected by the Law of Property Act, 1925 ? 10
6. State the rule against Perpetuities. What are the exceptions to this rule ? 10
7. To what extent, and by what processes, can a creditor reach his debtor's land during the debtor's life-time ? 10
8. State the facts and explain the principles involved in the case of :— 10  
(a) *London and South Western Railway Co. v. Gomm*, 20 Ch.D. 562.  
*Or*,  
(b) *In re Rosher*, 25 Ch.D. 801.

## SECOND HALF

*Examiners*—{ MR. J. BAROAH, BARRISTER-AT-LAW.  
,, A. K. SARKAR, M.A., BARRISTER-AT-LAW.

*Answer ANY FIVE of the following questions*

1. Explain any two of the following terms :— 10  
(a) Specific legacy, (b) Codicil, (c) Unprivileged will, (d) Administration *de bonis non*, (e) Ademption of legacies.
2. Discuss the validity of the following bequests :— 10  
(a) A testator bequeathed Rs. 1,000 to each of the three children of A. At the date of the will A had four children. All these four children survived the testator.  
(b) A, a bachelor, bequeaths a legacy 'to my wife B'. A afterwards marries B. B survives A.

3. What do you understand by conditional bequest ? 10
  - (a) A bequeaths Rs. 1,000 to B on condition that he shall marry A's daughter. A's daughter was dead at the date of the will. Is the bequest valid ?
  - (b) A legacy is bequeathed to A on condition that he shall marry with the consent of B, C, and D. A marries without their consent. Is A entitled to the legacy ?
4. What is the difference between Probate and Letters of Administration ? Discuss the liability of an executor in case of devastation. 10
5. What do you understand by *donatio mortis causa* ? Is it recognised in (a) Hindu Law, (b) Mahomedan Law ? State how it differs from (a) a legacy, (b) a gift *inter vivos*. 10
6. State briefly the law regarding revocation of will. 10
 

A, while delirious, tears up his will into pieces. The pieces are preserved, and on recovery A is informed of what he had done, and A said that A would make a fresh will. A dies without making a fresh will. Is the will revoked ?
7. State the facts and explain the principles involved in the case of :— 10
  - (a) *Bhagwati Barmanya v. Kalicharan Singh*, I.L.R. 32 Cal. 992.

Or,

  - (b) *Sailajaprasad Chatterjee and others v. Jadunath Bose*, 21 C.L.J. 88.

## CONTRACTS AND TORTS

*Paper-Setters*—{ MR. S. M. BOSE, M.A., BARRISTER-AT-LAW.  
 ,, S. P. MOOKERJEE, M.A., B.L.,  
 BARRISTER-AT-LAW.

*The questions are of equal value*

*Attempt ANY FIVE questions from EACH half*

### FIRST HALF

*Examiners*—{ MR. S. P. MOOKERJEE, M.A., B.L.,  
 BARRISTER-AT-LAW, M.L.C.  
 ,, ASRAF ALI, BARRISTER-AT-LAW.

1. What are the points of difference in English Law between a simple contract and a contract under seal ? Do the English Law and Indian Law differ in this respect ?
2. Define Consideration, Reciprocal Promises, Void and Voidable Contracts. Give illustrations
3. Discuss the elements of fraud as a vitiating element in contracts. State the circumstances under which *silence* amounts to fraud (i) in ordinary contracts, and (ii) in contracts *uberrimae fidei*.
4. Explain : 'Damages must not be too remote.' Distinguish between penalty and liquidated damages, and state how far the distinction is observed in the Indian Contract Act.
5. In what cases may a Court dissolve a partnership under the Contract Act ?
6. Explain and illustrate how far a Court will uphold agreements in restraint of trade.
7. State the facts of, and the principles laid down in, *Cundy v. Lindsay*, L.R. 8 App. Cas. 459.

## SECOND HALF

*Examiners*—{ MR. M. N. GHOSH, M.A., B.L., BARRISTER-AT-LAW.  
,, NARAYANCHANDRA KAR, B.L.

1. Define a tort, and distinguish it from a breach of contract and a crime. Can the same act be a tort, a breach of contract, and a crime ? Illustrate.
2. 'Every injury imports a damage though it does not cost the party one farthing.' Explain.
3. 'There is no contribution between joint tort-feasors.' Discuss this proposition, its limitations, and exceptions.
4. Mention the principal differences between libel and slander. How far is 'fair comment' a sufficient defence in an action for libel ?
5. Is a person liable in tort for inducing another to break a contract ? Discuss, giving illustrations.
6. State the facts of, and discuss the principles laid down in, *Corporation of the City of Glasgow v. Taylor* (1922), 1 A.C. 44.
7. Discuss the rule in *Rylands v. Fletcher*, and state the exceptions to that rule

August, 1933

## MAHOMEDAN LAW AND LAW OF PERSONS

## FIRST PAPER

*Paper-Setters*—{ SIR Z. R. ZAHID SUHRAWARDY, KT., M.A., B.L.,  
BARRISTER-AT-LAW.  
MR. NURUDDIN AHMED, B.L.

*The questions are of equal value*

## FIRST HALF

*Examiners*—{ SIR ABDULLA SUHRAWARDY, KT., M.A., PH.D.,  
D.LITT., BARRISTER-AT-LAW, M.L.A.  
MR. RASIDUL HASAN, M.A., B.L.

1. What are the essentials of a valid marriage under the Mahomedan law ? Distinguish between a void and an invalid marriage, and state their respective effect on the status of children.
2. Distinguish between Hiba and Hiba Belewaz. What are the requisites of a valid Hiba ? Is writing necessary for the validity of a gift of immoveable property worth Rs. 500 ? How can a gift of immoveable property be effected when the same is in the possession of tenants ?

3. (a) Classify the heirs according to the Sunni school and explain their respective claims to inheritance.

Or,

(b) What do you understand by the term Waqf ? How is waqf constituted ? Is there any limit to the power of a person to dedicate property by way of waqf ? What is the legal effect of a dedication during Marazul Maut ? Can (a) a waqf *inter vivos*, or (b) a testamentary waqf be revoked ? How does the Waqf Validating Act affect waqfs created before and after its enactment ? Notice any statutory change in the law since its enactment.

4. Explain any three of the following :—

Marazul Maut, Musha'a, Shufa, Mahrul Misl, True and False grandfather.

5. Discuss, with reference to the facts, the principles enunciated in *any one* of the following cases :—

(a) *Ashrafjuddaula v. Hyder Husain*, 11 M.I.A. 94.

(b) *Rani Khujurunisa v. Rowshan Jehan*, 3 I.A. 291.

(c) *Khaja Salimullah v. Abul Khair Mohamed Mustafa*, 37 Cal. 263.

## SECOND HALF

Examiners—{ Mr. WAHED HUSSAIN, B.L.  
,, SRIDHAR CHATTERJEE, BARRISTER-AT-LAW.

1. What is domicile of origin ? Can a person change his domicile of origin ; if so, how ? Does a change of domicile necessarily involve a change of nationality ?

2. (a) Write a short note on the effect of coverture as to wife's property, indicating the change effected by the Married Women's Property Act.

Or,

(b) Write a short note on the liability of the master for the tortuous act of his servant.

3. Is there any statutory duty under the English Law of parents to educate their children ; if so, what is the extent of that duty ? Is there any corresponding liability of parents to educate their children in this country ?

4. What is the age of majority under the Indian Majority Act ? In what respect does it differ from the English Law ?

A Muslim was born on the 3rd August, 1915, and his properties were placed in charge of the Court of Wards on the 20th December, 1931. When does he attain majority for the purpose of contracting (a) a valid marriage, and (b) a mortgage of his properties ?

5. Discuss, with reference to the facts, the principles enunciated in *any one* of the following cases :—

(a) *Udny v. Udny*, 1 H.L. 441.

(b) *Abraham v. Abraham*, 9 M.I.A. 105.

(c) *Lala Khunni Lal v. Kunwar Gobind Krishna*, 88 I.A. 87.

## TRANSFER OF PROPERTY

*Paper-Setters*—{MR. J. C. GUPTA, BARRISTER-AT-LAW.  
,, RAMAPRASAD MOOKERJEE, M.A., B.L.

*The questions are of equal value*

*Answer ANY FIVE questions from EACH half*

## FIRST HALF

*Examiners*—{MR. SANATKUMAR CHATTERJEE, M.A., B.L.  
,, DHIRENDRAKRISHNA RAY, B.L.

1. Discuss whether the provisions of the Transfer of Property Act affect (i) any right, liability, or relief in respect of any legal relation constituted before the Act came into force, and (ii) the procedure for obtaining such relief.

2. 'Redeem up and foreclose down.' Explain and discuss.

3. A lets six bighas of land to B for the purpose of a factory for a term of twenty years. The factory is not successful, and B discontinues it, but proceeds with the knowledge of A to put up shops and houses on the land. At the end of the term, A demands possession of the land. Can A recover in ejectment, notwithstanding that he stood by and did not warn B against erecting shops and houses? If so, is A entitled to the shops and houses for nothing? Discuss, citing any relevant authorities.

4. Discuss, with reference to case-law, as to when a transfer otherwise valid may be avoided by a third party.

5. A enters into an open contract to sell certain immoveable property to B for a settled price; the sale is to be completed in two months' time. What has each party to do? Who is entitled to the rents and profits in the mean while? What is the covenant for title and who is entitled to enforce it?

6. 'If, after the date of a mortgage, any accession is made to the mortgaged property, the mortgagee, in the absence of a contract to the contrary, shall, for the purpose of the security, be entitled to such accession.' Discuss, with reference to case-law, the principle laid down. How far is the principle in with accord English Law?

7. What is an actionable claim? State the law regarding the transfer of actionable claims.

## SECOND HALF

*Examiners*—{MR. RAMAPRASAD MOOKERJEE, M.A., B.L.  
,, MOHENDRANATH BAGCHI, B.L.

1. 'A partial restraint against alienation is not bad but an absolute one is.' Discuss with illustrations.

2. 'Personal or collateral contracts between the lessor and the lessee which do not concern the thing demised do not pass.' Is there any exception to this general rule? Comment with reference to case-law.

3. Who are the persons entitled to sue for redemption of the mortgaged property ?

Can a reversioner institute a suit during the lifetime of a limited owner to redeem a mortgage by such limited owner ? Give reasons for your answer.

4. Can the donor revoke a gift merely on the ground that he had not had an absolute indefeasible title to the property ? Discuss.

5. What are the formalities that must be observed for the purpose of making a gift of immoveable property under the Transfer of Property Act ? State if there is any difference in the mode of transfer of immoveable property by *sale* and *gift*.

6. (a) What is the effect of non-registration of documents required to be registered under Section 17 of the Indian Registration Act ?

(b) A lease for five years is not registered, but the lessee is put into possession and rents are received from him by the lessor. Can the lessee be treated as a trespasser ? Can he be ejected ; if so, how ?

7. Do the following documents require registration ? Give reasons for your answer :—

(a) A will whereby the testator *inter alia* bequeaths immoveable property of the value of more than Rs. 100.

(b) A Waqfnama.

(c) Agreement for sale of immoveable property containing a recital of payment of a part of purchase money of more than Rs. 100.

(d) Decree of the Calcutta High Court directing one party to make over possession to the other of immoveable property valued at Rs. 10,000.

## REAL PROPERTY AND SUCCESSION

Paper-Setters—{ Mr. JYOTIPRASAD SARBADHIKARI, M.A., B.L.  
 „ J. N. MAJUMDAR, M.A. B.L.,  
 BARRISTER-AT-LAW.

*The figures in the margin indicate full marks*

### FIRST HALF

Examiners—{ Mr. J. N. MAJUMDAR, M.A., B.L.,  
 BARRISTER-AT-LAW.  
 „ RAMENDRAMOHAN MAJUMDAR, M.A., B.L.

*FIVE questions only are to be attempted. Candidates are required to give their answers in their own words as far as practicable*

1. Explain any three of the following :—

10

Tenure in Burgage, Estate *per autre vie*, Livery of Seisin, Chattel Real, Springing use.

2. Distinguish between and give examples of :—

10

- (a) Joint tenancy and Tenancy in common.  
(b) Executory devise and Contingent remainder.

Or,

What do you understand by :—

- (a) Equity of redemption ;  
(b) Equitable mortgage ;  
(c) Clog on the equity of redemption ?

3. What are the points of difference between the following tenures?—

10

- (a) Freehold, (b) Copyhold, (c) Leasehold.

4. 'The terms *real* and *personal* are first applied to actions and afterwards extended to things and property.' Discuss.

10

Or,

'By English Law, moveable goods are the object of absolute ownership but land is the object of tenure.' Discuss.

10

5. State the facts and explain the principles involved in :—

*In re Rosher*, 26 Ch.D. 801.

Or,

*Morley v. Bird*, 3 Vass. 621=3 R.R. 106.

## SECOND HALF

Examiners—{MR. SACHINDRANATH MUKHERJEE, M.A., B.L.  
,, H. BANERJEE, B.L., BARRISTER-AT-LAW.

*Five questions only are to be attempted*

1. Explain and answer *any two* of the following :—

10

- (a) Gift in contemplation of death. Can a Hindu make such a gift ?  
(b) Executor of his own wrong. What is his liability ?  
(c) Ademption of legacies. Can a demonstrative legacy be adeemed ?

2. How is an unprivileged will attested ? What is the effect of such a will being attested by a legatee ?

10

Or,

Discuss the effect of the following bequests :—

- (a) A legacy to the youngest son of B. B has no son at the time of the death of the testator.  
(b) A bequest to A or B.  
(c) A bequest of a Zamindari to A by the first clause of the will and to B by its last clause.

3. 'A Hindu will should be construed relatively to the ordinary notions and wishes of Hindus respecting the devolution of property.' Discuss how far this rule of construction should be followed.

10

Or,

A Hindu testator in making an endowment in favour of the family *Thakur* provides that the seniormost male member amongst his descendants will be the *shebait* for the time being. Is the provision valid ? Cite any case you may think of in support of your answer.

4. Explain the difference between general legacy, specific legacy, and demonstrative legacy. What are their respective advantages and disadvantages in regard to abatement? 10

Or,

What is the effect of probate in regard to the antecedent acts of the executor? Can a legatee under a will executed by a Mahomedan sue the executor for legacy without taking out probate?

5. A testator gave his property in equal shares to his two sons *S* and *A* with the proviso that 'in the event of any of my son or son's sons dying without leaving male issue, the other son or son's sons living at the time shall get that share.' The testator died leaving *S* and *A*, and thereafter *S* died leaving a widow. Discuss, in the light of *Narendra v. Kamal Basini*, whether the gift over is valid. 10

Or,

Explain what is meant by 'power of appointment.' What is the authority for such power and its limits under Hindu Law according to the decision in *Bai Motibahu v. Bai Mamubai*, 21 Bom 709 (P.C.). Is a power given to the unborn son of a living person valid?

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## COTRACTS AND TORTS

Paper-Setters—{ THE HON'BLE MR. JUSTICE H. R. PANCKRIDGE,  
M.A., BARRISTER-AT-LAW.  
MR. S. P. MOOKERJEE, M.A., B.L.,  
BARRISTER-AT-LAW, M.L.C.

*The figures in the margin indicate full marks*

### FIRST HALF

Examiners—{ MR. BARENDRANATH BOSE, M.A.,  
BARRISTER-AT-LAW.  
,, SUSILKUMAR RAYCHAUDHURI, M.A., B.L.,  
BARRISTER-AT-LAW.

*Five questions are to be attempted, of which Question No. 1 must be one*

1. State the facts and explain the principles laid down in one of the two following cases :— 10

- (a) *Cundy v. Lindsay*, L.R. 3 App. Cas. 459.  
(b) *Hadley v. Baxendale*, 9 Exch. 241.

2. At what point in time are— 10

- (i) an offer,  
(ii) an acceptance of an offer,  
(iii) a revocation of an offer deemed to be made?  
(Give illustrations.



8. Explain with illustrations what is meant by— 10

- (a) condition precedent;
- (b) condition subsequent;
- (c) warranty.

4. A, B and C each loses a dog and advertises a reward for Rs. 30 for its return. 10

(a) A's dog is returned by a person who has not seen the advertisement.

(b) B's dog was stolen and is returned by a policeman who recovered it from a thief.

(c) C's dog was also stolen. The thief, unable to sell it, himself returned it to C, confessing his theft.

The persons who returned the dogs all claimed the reward from the respective owners. Advise A, B and C as to their liability.

5. Illustrate the exceptions to the rule— 10

'No seller can give to the buyer of goods a better title to those goods than he has himself.'

A bought goods of B, representing himself to be C, and then sold and delivered the goods to D. Can B recover them or their value from A or D? Give reasons for your answer.

6. What special rules affect the capacity to contract of— 10

- (i) Corporations,
- (ii) Lunatics?

State the difference, if any, between English Law and the Indian Law on this question.

7. What is meant by suing on a *quantum meruit* and when will such an action lie?

A servant is engaged upon the terms of being paid a lump sum for the period of his service. Is he entitled to the whole or any part thereof if the period of his service is not completed in consequence of—

- (a) the death of his master,
- (b) his dismissal for misconduct, or
- (c) the fact of his having left voluntarily?

8. 'A man cannot acquire rights under a contract to which he is not a party.' (Anson.) 10

Is this statement accurate if applied to Indian Law? Give reasons for your answer.

## SECOND HALF

Examiners— $\left\{ \begin{array}{l} \text{MR. S. P. MOOKERJEE, M.A., B.L.,} \\ \text{BARRISTER-AT-LAW, M.L.C.} \\ \text{,, SUDEHINDRAKRISHNA DATTA, M.A. (OXON.),} \\ \text{BARRISTER-AT-LAW.} \end{array} \right.$

Five questions are to be attempted, of which Question No. 1 must be one

1. State the facts of, and explain the principles in, one of the following cases:— 10

(a) *Glasgow Corporation v. Taylor* (1922), 1 A.C. 44.

(b) *Jefferson v. Derbyshire Farmers, Ltd.* (1921), 2 K.B. 281.

2. 'The combination of *injuria* and *damnum* must be found in every tort.' Discuss the accuracy of this statement. 10

3. A newspaper is sued for libel by X, an actor, who complains that he has been libelled in an article written by the dramatic critic of the newspaper in which the latter criticized a play in which X acted. The article contained the following words :— 10

'X acted throughout like a drunken man.'

What defences are open to the newspaper ?

4. When is an employer liable for the torts of an independent contractor ? 10

5. A, who owns land abutting on a highway, obstructs the highway, thereby delaying B, among other members of the public, in passing along it. He also digs a hole on his land into which C, while passing along the highway on a dark night, falls and is injured. Can B or C maintain an action against A ? 10

6. Define and distinguish— 10

(a) Inevitable accident,

(b) Act of God.

A, a builder, stored a low pile of slates on his land 4 yards from the highway. A violent gale arose, and blew some of the slates on to the highway, and one of them injured B's head. Is A liable in tort to B ?

7. (1) A, a railway guard, in assisting B, a passenger, to alight from a train, negligently knocked a parcel of fireworks out of B's hand. An explosion ensued, which upset a weighing machine 10 yards away. This fell upon and injured C, an intending passenger. Is A liable to C ? 10

(2) D, a woman who was pregnant, received so severe a shock from the sight of a street accident to her brother E, caused by the negligence of F, that she had an illness, and her child G was born an idiot. Has D or G any remedy against F ?

8. 'There is no contribution between joint tort-feasors.' What does this rule mean, and what exceptions are there to it ? 10

A, a publisher, has a contract with B, an author, by which he undertakes to publish B's book. There is a clause by which B undertakes to indemnify A if he has to pay damages for any libel contained in the book. The book contains a libel of which B could not possibly be aware.

Can A recover from B the damages he has paid in respect of the libel ?

# Final Examination in Law

## February, 1933

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### LAND LAW

*Paper-Setters*—{ THE HON'BLE MR. JUSTICE MANMATHANATH  
MUKHERJEE, M.A., B.L.  
MR. BIRAJMOHAN MAJUMDAR, M.A., B.L.

*The figures in the margin indicate full marks*

### FIRST HALF

*Examiners*—{ MR. B. MANDAL, M.A., B.L., BARRISTER-AT-LAW.  
,, PRAPHULLACHANDRA CHAKRABARTI, M.A., B.L.  
,, BYOMKESH BASU, M.A., B.L.

*Answer ANY FIVE of the following*

1. 'Regulation I of 1793 is the charter of the landed aristocracy of Bengal.' Explain what is meant by this statement. 10
2. Explain any four of the following terms :— 10
  - (a) Khudkasht raiyats.
  - (b) Paikasht raiyats.
  - (c) Lakheraj tenures.
  - (d) Shikami taluks.
  - (e) Putni taluks.
  - (f) Abwabs.
3. On what ground can a revenue sale be set aside? 10
 

An estate was sold for arrears of revenue when no such arrears existed. The sale was regularly conducted and the purchase was made *bona fide*. An appeal was taken to the Commissioner of Revenue who refused to interfere. Is there any remedy open to the aggrieved party? Discuss.
4. Is there any analogy between the case of a sale for arrears of revenue and that of a putni taluk? 10
 

What is essential to the validity of a sale held under Reg. VIII of 1819?

Who is answerable for the observance of the formalities prescribed by Sec. 8 of Reg. VII of 1819?
5. 'The rights of a purchaser at a revenue sale are entirely different from those of a purchaser at a voluntary sale.' Explain. 10
6. What is the law relating to ancient lights? Explain it with reference to one leading case on the subject. 10
7. Discuss the case of *Srinath Roy v. Dinabandhu Sen*, 42 I.A. 221.

## SECOND HALF

Examiners—{ Mr. WARED HUSSAIN, B.L.  
 „ ARUNCHANDRA BASU, M.A., B.L.  
 „ GOPALCHANDRA MUKHERJEE, B.L.

*Answer ANY FIVE of the following*

1. Can a co-sharer landlord acquire occupancy rights in any raiyati holding on his own property which he acquires in any way, other than at a rent sale? State the new and the old law on the subject. 10

2. On what grounds can an occupancy raiyat be ejected? 10

A, an occupancy raiyat on the land, changed the character of the holding by making improvements inconsistent with the purpose for which the land was leased. B, the landlord, stood by and thereby caused a belief in the mind of A that the change had B's approval. B, soon after, started an action for ejectment. Is B entitled to succeed? Can A claim compensation for his improvement?

3. What are the circumstances under which a tenant can deposit rent in Court? State the essentials of a valid deposit. 10

4. In order to prove that a tenant has been holding at a uniform rate of rent for 20 years, is it necessary for the tenant to prove actual payment of rent for all these years? 10

It was established in a particular case that rent had been paid at the rate alleged by the tenant during the years 1891 to 1895 as also during the years 1904 to 1911. Does the presumption under Section 50, Cl. 2, of the Bengal Tenancy Act regarding uniform rate of rent arise? Discuss.

5. Can a right to compel a man to submit to the penetration of his land by the roots of a tree planted on his neighbour's soil be acquired by prescription? Discuss. 10

6. 'There may be as many kinds of servitudes as there are ways whereby the liberty of a house or tenement may be restrained in favour of another tenement. But it must not be supposed that incidents of a novel kind can be devised and attached to property at the fancy or caprice of any owner.' Explain with illustrations. 10

7. Give the facts of, and decision in, *Chandra Kanta Nath v. Amjad Ali* I.L.R. 48 Cal. 783 F.B. ~ 32 C. & J. 296 F.B. 10

## EQUITY

Paper-Setters—{ B. C. GHOSH, M.A., B.L., BARRISTER-AT-LAW.  
 { J. C. GUPTA, BARRISTER-AT-LAW.

*The figures in the margin indicate full marks*

## FIRST HALF

Examiners—{ Mr. P. MITTER, BARRISTER-AT-LAW.  
 „ SACHINDRANATH BANERJEE, M.A., B.L.  
 „ ABUL HUSSAIN, M.L.

*ANY FIVE out of the SEVEN are to be answered*

1. Explain and illustrate :—

(a) Equity acts in *personam*. 5

(b) When there is equal Equity the law shall prevail. 5

2. Equity had come not to destroy the law but to fulfil it. Explain and illustrate. 16
3. Discuss the doctrine of Part-performance of Contract. What part does equity play in aiding or supplementing Common Law in the interests of justice? 10
4. (a) What do you understand by the expression Specific Performance of Contract? 3
- (b) Is it reciprocal? 2
- (c) Can a judgment-debtor, against whom a decree for Specific Performance has been passed, enforce such decree against his judgment-creditor. If so, how? 5
5. A, by contract, agrees to sing in B's theatre for one year, and further agrees not to sing during such period in any other theatre. A breaks such contract by singing in another theatre. What is B's remedy if any? How can B enforce same? On what principles will the Court act? Discuss. 10
6. (a) Can you create a mortgage only by deposit of title-deeds? If so, where in India? Is registration necessary? 5
- (b) Discuss the question of Priority between such mortgage created by deposit of title-deeds (if possible) and a subsequent legal mortgage. 5
7. Explain and illustrate the doctrine of Election. 10

## SECOND HALF

Examiners—{ MR. BANBIHARI DAS, BARRISTER-AT-LAW.  
 „ HARIPRASANNA MUKHERJEE, M.A., B.L.  
 „ A. K. ROY, (JR.) M.A., B.L., BARRISTER-AT-LAW.

1. (a) If an attorney purchases a client's property in the name of a trustee or agent without disclosing such fact to the client, has the client any remedy? If so, what? 5
- (b) What is a benami transaction and the effect thereof? 5
2. (a) What is a trust? Define and illustrate. 5
- (b) What is a *cestui que trust*? Can he enforce the trust? 5
3. Discuss shortly the principles laid down in *Peary Mohan Mukerjee v. Monohar Mukerjee*, 48 Cal. 1019, with special regard to—
- (a) removal of trustee;
- (b) recovery of trust property.
4. What is a constructive trust? Discuss how it is created, and give an example. 10
5. A makes over Rs. 1,000 to B on trust to pay A's creditors. B pays off A's creditors in full, and has still in his hands Rs. 300. What are A and B's position with regard to this Rs. 300? Discuss. 10
6. What do you understand by mixing of trust funds? Is it a breach of trust, and what is the remedy of the beneficiary in such a case? 10
7. Discuss what is—
- (a) laches, 3
- (b) acquiescence, 3
- (c) the effect of either as a defence to a suit. 4

## EVIDENCE AND CIVIL PROCEDURE

Paper-Setters— { MR. S. N. DUTT, M.A., LL.B.,  
BARRISTER-AT-LAW.  
DR. RADHABINOD PAL, M.A., D.L.

*The questions are of equal value*

## FIRST HALF

Examiners— { MR. NIRMALKUMAR SEN, M.A., B.L.  
" RATANMOHAN CHATTERJEE, M.A., B.L.,  
ATTORNEY-AT-LAW.  
" K. C. MUKHERJEE, B.L.

1. 'A rule of evidence,' it is said, 'is not a measure supplied to a judge to enable him to determine whether a fact is proved or not. It is a rule *simply* for *excluding* evidence.' Comment on this, and point out the real use and importance of rules of evidence.

2. Explain the doctrine of estoppel, and examine how far a man may be estopped from alleging his legal incapacity.

Or,

Write a note on 'estoppel by agreement.'

2. 'The declarations of a party to the record, or of one identified in interest with him, are, as against such party, receivable in evidence.' Examine this general proposition regarding reception of *admission* in evidence, with reference to the provisions of the Indian Evidence Act.

Or,

Discuss the case of *Gujju Lal v. Fatteh Lal* (I.L.R. 6 Cal. 171), and examine how, if at all, it has been affected by subsequent authoritative decisions.

4. Rules of limitation and prescription are sometimes looked upon as infamous power created by positive law to decrease litigation. Give your estimate of the object of Statutes of Limitations, and examine whether such a statute should or should not have a liberal construction.

Or,

Discuss the case of *Sarat Kamini Dasi v. Nagendranath Pal*, 29 C. W. N. 978.

5. A borrowed a sum of money from H on the 25th April, 1911, and B stood surety for A. On the 11th November, 1911, A paid Rs. 200 on account of interest with B's knowledge and consent. Thereafter, no further payment being made, H instituted his suit for the money due on the 12th November, 1914, against A and B. B pleaded limitation. Examine how far this plea is sustainable.

Or,

Give the case of *Vidyavaruthi v. Balswami*, and examine how it has been affected by subsequent amendment of the Indian Limitation Act.

## SECOND HALF

Examiners—{ MR. SARATCHANDRA MOOKERJEE, M.A., B.L.  
 „ D. P. KHAITAN, M.A., B.L., ATTORNEY-AT-LAW.  
 „ NANDAGOPAL BANERJEE, B.L.

*To answer Question 1 and ANY FOUR of the rest*

1. Explain the doctrine of 'Res judicata,' and examine if it is a part of the doctrine of estoppel.

2. Give a short account of the rules regulating the *Venue* in British India.

3. A brings a suit against B and C for recovery of possession of a plot of land. The suit is dismissed against C for want of cause of action, and is decreed against B. A, in execution of this decree, takes delivery of possession of lands in excess of the decree. The excess belongs to C. Explain what remedy is available to C.

4. Discuss the case of *Talebali v. Abdul Aziz*, 84 C.W.N. 66 (F. B.).

5. Examine whether a Court executing a decree can go behind the decree.

6. State the conditions that will render a sale held in execution of a decree liable to be set aside. Who are the persons entitled to apply under Order 21, rule 90, C.P.C. to set aside the sale?

A brings a suit for money against B, and obtains an attachment before judgment of B's immoveable property. During the pendency of A's suit, the property is sold in execution of a decree of C against B. Advise if A can apply to set aside the sale.

7. Order 21, rule 2 (1), C.P.C., enacts : 'Where any money payable under a decree of any kind is paid out of Court or the decree is otherwise adjusted in whole or in part to the satisfaction of the decree-holder, the decree-holder shall certify such payment or adjustment to the Court whose duty it is to execute the decree and the Court shall record the same accordingly.'

Cl. 3 of the rule lays down : 'A payment or adjustment which has not been certified or recorded, as aforesaid, shall not be recognised by any Court executing the decree.'

A obtained a decree for possession of a plot land as against B. After this decree A and B came to an amicable settlement, and A granted a lease of the plot to B. This adjustment was not certified. Subsequently, in disregard of this settlement, A applied for execution of the decree, seeking thereby to recover possession of the property. B objects to this execution and sets up the lease. Examine if this objection can be given effect to by the executing Court.

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## CRIMINAL LAW

*Paper-Setters*—{ THE HON'BLE MR. JUSTICE S. C. MULLICK,  
M.A., I.C.S.  
DR. S. K. SEN, M.A. BARRISTER-AT-LAW.

*Candidates shall give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiners*—{ MR. CHANDRABHUSHAN BANERJEE, B.L.  
,, SHEKHARKUMAR BOSE, M.A., B.L.,  
BARRISTER-AT-LAW.  
,, N. K. GHOSH, B.A., LL.B.,  
BARRISTER-AT-LAW.

ANY FOUR of the FIRST SEVEN questions and Question 8 to be answered

1. Define : Government, Judge, Dishonesty, Valuable Security, 10  
Voluntarily.

2. Has any offence been committed, and if so what, in each of the 10  
following cases ?—

(a) A dips his pen in B's ink.

(b) A assaults a man believing him to be a ghost, and the assault  
proves fatal.

(c) A kills B by shooting him with an unlicensed gun by accident.

(d) X in trying to hit Y, who was carrying a baby on his shoulder,  
actually hits the baby, and as a result thereof the baby dies.

(e) B, by threats of death, induces A to do an act to enable B to  
commit a murder.

Give reasons for your answer.

3. Do you know if there is any offence under the Indian Penal Code for 10  
which there is no other sentence than death ? If so, name it.

Discuss how far 'age' is relevant on the question of criminal  
liability.

4. Define Theft. When does Theft become Robbery, and when does 10  
Robbery become Dacoity ?

Five men armed were discovered committing an act of house-breaking  
by night. One of the party was engaged in cutting a hole through the  
wall, while the others stood on guard. When alarm was given, the neigh-  
bours ran up and one of the robbers killed one of the villagers, and the  
robbers effected their escape. Were the five men guilty of any offence, and  
if so, of what offence ?

5. What offence, if any, was committed in each of the following 10  
cases ?—

(a) A trespassed on the land of B whose servants seized and confined  
A till the following day when B gave information to the  
police.

(b) A instigated B to murder D. B, in pursuance of the instigation,  
stabbed D. D recovered from the wound.

(c) A refused to sign a statement made by him at his trial in answer  
to questions put by the Court.



- (d) A police officer made a false entry in the Special Diary relating to a case which was being investigated by him.
- (e) A, by deceitful means, induces B to go from Howrah to Burdwan. Give briefly reasons for your answer.
6. What is 'making a false document' ? When does it become 'forgery' ? 10
7. What are the principles laid down in *Profulla Kumar Sarkar v. The Emperor* (85 Calcutta Weekly Notes, Page 731, Full Bench) ? 10
8. Give a general account of a criminal trial in England. 10

## SECOND HALF

Examiners—{ MR. MANI BANERJEE (JR.), BARRISTER-AT-LAW.  
 „ MANINDRANATH BANERJEE (SR.), B.L.  
 „ KHONDKER ALI AFZAL, BARRISTER-AT-LAW.

ANY FOUR out of the FIRST SEVEN questions and Question 8 to be answered

1. Define : ' Complaint,' ' Summons case,' ' Warrant case.' Give in brief the chief points of difference in the procedure of trial of a summons case and a warrant case. 10
2. How many classes of Criminal Courts are there in British India ? What are the sentences which each of these classes of Courts can pass ? 10
- The Subdivisional Magistrate of Uluberia (a Subdivision in Howrah District) draws up proceedings against X, a man residing within the Sub-division, for security for keeping the peace (Sec. 107, Cr.P.C.). The District Magistrate of Howrah transfers the case to a Magistrate of First Class stationed at Howrah, and this Magistrate disposes of the case and orders X to give security. Has there been anything illegal in the procedure ? Give reasons for your answer.
3. When can a Police Officer arrest a person without warrant ? 10
4. What are the conditions necessary for starting a proceeding under Sec. 133, Cr.P.C., for the removal of an obstruction or a nuisance ? 10
- A Subdivisional Magistrate draws up proceedings under Sec. 133, Cr.P.C., against X in respect of a pathway. X appears and shows cause against the order saying, among other things, that in respect of the pathway there is no public right. The Magistrate takes evidence to find out if the order is reasonable and proper, and, being satisfied that it is so, makes the conditional order absolute. Is there anything wrong in the procedure followed by the Magistrate ?
- Give reasons for your answer.
5. Where should A be tried in the following cases ?— 10
- (a) A put B in fear of injury at Comilla and thereby induced B to deliver property to him at Noakhali.
- (b) A, residing at Rungpur, writes and posts a letter to B, residing at Krishnagar, and instigates B to commit a murder at Bikaner.
- (c) A kidnaps B from her father's house at Bankura, takes her to Burdwan, and then to Howrah where he keeps her concealed.
- (d) A entices away, for purposes of illicit intercourse, a married woman from Berhampur and detains her at Rajshahi.
- (e) A and B left in a vessel from Barisal to Chittagong. During the voyage near an island within the District of Noakhali, A wilfully threw overboard a packet belonging to B.
- Give reasons in brief for your answers.

6. Does any appeal by *A* lie in the following cases, and, if so, to whom?— 10

- (a) *A* has been ordered by a First Class Magistrate to keep the peace.
- (b) *A* has been tried and sentenced by an Assistant Sessions Judge to 4 years' imprisonment.
- (c) *A* has been tried and sentenced by an Assistant Sessions Judge to 5 years' imprisonment.
- (d) *A* and *B* were tried together by an Assistant Sessions Judge and *A* was sentenced to 3 years' imprisonment and *B* to 5 years'.
- (e) *A* has been tried by an Additional Sessions Judge and sentenced to 3 years' imprisonment.
- (f) *A* is tried and sentenced by a Sessions Judge to three months' imprisonment.
- (g) *A* is tried and sentenced by a District Magistrate to a fine of Rs. 50.
- (h) *A* is tried and sentenced by a Presidency Magistrate to 6 months' imprisonment.
- (i) *A* is tried and sentenced by a Presidency Magistrate to a fine of Rs. 200.
- (j) *A* is tried and sentenced by a Presidency Magistrate to 6 months' imprisonment and a fine of Rs. 200.

7. (a) How can a previous conviction or acquittal be proved? 10

(b) When a Court convicts an accused person, can it pass any other order than sentencing him to punishment? If so, what order can it pass and under what circumstances?

8. Give a contrast between the rules as to confessions of a prisoner as they obtain in England and in France. 10

August, 1933

LAND LAWS

*Paper-Setters*—{ MR. BIRAJMOHAN MAJUMDAR, M.A., B.L.,  
,, NARENDRACHANDRA BOSE, M.A., B.L.

*The figures in the margin indicate full marks*

FIRST HALF

*Examiners*—{ MR. BIRAJMOHAN MAJUMDAR, M.A., B.L.  
,, PASUPATINATH GHOSH, M.A., B.L.  
,, MANINDRALAL BANERJEE, B.L.

*Answer ANY FIVE of the following*

1. What do you know about the Permanent Settlement of Bengal? 10  
What radical change as regards ownership of soil was effected by the settlement, and what benefits did the zemindars get by the same?

2. Explain the following terms :— 10  
 (a) Malgujari lands, (b) Chakran lands, (c) Badshahi and Non-Badshahi Lakheraj lands, (d) Istemrari tenure.  
 Is there any real distinction now between Lakheraj and Niskar tenures ?
3. To what class of tenures does the *astum* law (Reg. VIII of 1818) apply ? What is the condition precedent to the applicability of the said law to tenures ? How many sales are held each year under the said Regulation, and when ? Is the Collector responsible for observance of all formalities as regards sales under the Regulation ? 10
4. A purchases a putni tenure held by B in a sale under Reg. VIII of 1819 in Jyet, 1325 B.S. B sues A for setting aside the sale in the Civil Court in Bysakh, 1326 B.S. On what grounds can B get the sale set aside ? 10
5. Explain what you mean by 'accretion' and 'reformation *in situ*.' 10  
 State the conditions on which an occupancy ryot can claim land added to his holding by the recess of a tidal and navigable river.
6. Discuss the principles laid down in the case of *Raja Lelanund Singh Bahadur v. The Government of Bengal*, 6 M.I.A. 101. 10
7. What do you understand by the expression 'latest day of payment' ? 10  
 Touzi No. 1 of the Khulna Collectorate is sold for arrears of revenue on the 10th January, 1933, for recovery of Rs. 1,563 alleged to be due for September kist of 1932 due on 28th September, 1932. Is the sale a valid one ? State reasons for your answer.

## SECOND HALF

Examiners—{ MR. SURENDRANATH BOSE, B.L.  
 ,, NARAYANCHANDRA KAR, M.A., B.L.  
 ,, SURYYAKUMAR AICH, B.L.

Answer ANY FIVE of the following

1. Define the term 'tenant.' Into how many classes are tenants divided in the Bengal Tenancy Act ? 10  
 Is Bhagchasi a tenant ? Give reasons for your answer.
2. What is right of occupancy ? How can it be acquired, and by whom ? 10  
 A holds an occupancy holding of 50 bighas in a village where each bigha of land is worth Rs. 10. A sells it to B for Rs. 50 only by a conveyance registered on the 5th December, 1932, and deposits Rs. 10 with the registering officer as landlord's fees. C, the landlord, gets notice of such transfer with the requisite fees on the 15th January, 1933. How can C recover the holding and within what time ?
3. State the grounds on which the rent of an occupancy ryot can be enhanced 10  
 A, the landlord, sues B, his occupancy ryot, for enhancement of rent which has not been enhanced for the last 25 years, on the ground of rise in prices of staple food crops, and it is found on comparison of the price lists that A is entitled to an enhancement of 8 *as.* per rupee. To what extent can the Court interfere as regards the amount of enhancement and as regards the period for which it is to take effect ?

4. *A* purchases a tenure in execution of a rent decree under Ch. XIV of the Bengal Tenancy Act with power to avoid all encumbrances. *B* holds a holding in the tenure at a fixed rate of rent. Can *A* eject *B*, and if so, on what grounds? 10
5. State the facts and explain the principles laid down in the case of *Krishnapada Chatterjee v. Manada Sundari Ghose*, 36 C.W.N. 518=55 O.L.J. 240. 10
6. What is an easement of necessity? How can it be acquired? 10  
How can easements be acquired under the Indian Limitation Act?
7. What do you mean by 'abwab'? 10  
*A*, the owner of a permanently settled estate, has let out 15 bighas of agricultural land to *B* by a Mourashi mukurari pattah, dated 6th September, 1879, at a rental of Rs. 15 per year plus Rs. 5 as the price of ghee and goat to be supplied at Puja time every year. Is the price of ghee and goat an abwab? Can *A* recover it by suit? Discuss.

## EQUITY

MR. PANCHANAN GHOSH, M.A., B.L.  
*Examiners—* } „ KAMALABHUSAN BOSE, M.A., B.L.,  
BARRISTER-AT-LAW.  
 „ B. MANDAL, B.A., BARRISTER-AT-LAW.

MR. H. D. BOSE, M.A., BARRISTER-AT-LAW.  
*Paper-Setters—* { „ PANCHANAN GHOSH, M.A., B.L.

## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

1. *A* is possessed of a mill and of plant, machinery, and stock-in-trade belonging to it. Shortly before his death *A* indorses on the lease the following memorandum: 'This deed and all thereto belonging I give to *R*, now an infant, from this time forth, with all the stock-in-trade,' and signs it, and then delivers the lease to *R*'s mother on his behalf.

Discuss whether there has been a valid declaration of trust of the property in favour of *R*.

*Or,*

*A*, by his will, gives all his real and personal estate and effects unto and to the absolute use of his wife, her heirs, executors, administrators, and assigns, 'in full confidence that she will do what is right as to the disposal thereof between my children, either in her lifetime or by will after her decease.'

Discuss whether the interest the widow takes under the will is fettered by any trust in favour of the children.

2. *C*, is a co-trustee with *T* of a will, and also a co-trustee with *B* of a settlement. He misappropriates a considerable sum of the settlement fund, and then applies an equal portion belonging to the will fund in the purchase of a property in the joint names of himself and *B*. *C* dies insolvent. Neither *B* nor his *cestus que trust* has any notice that the property was purchased with part of the will fund. *T* is also innocent of *C*'s fraud.

Discuss whether *T* would have the right to have the property transferred to him.

3. *A*, domiciled in Scotland, dies leaving personal estate in Scotland and also in England and heritable property in Scotland. He made a will in Scotch form, and appointed Scotchmen to be his executors and trustees. An infant legatee, resident in England, brings an action for the administration of the estate against the executor-trustees who enter appearance without protest.

Has the English Court jurisdiction to order administration as to the whole estate?

4. 'Equitable estates and interests are rights in *personam*, but they have a misleading resemblance to rights in *rem*.' Explain, noting briefly the several stages of this development. Can an equitable right be enforced against a disseisor who has acquired title by lapse of time?

Or,

Discuss whether *A* can recover the goods from *X* in the following cases:—

(a) *A* is the bailor, *B* is the bailee of goods; *B* sells the goods to *X*, the sale not being authorized by the terms of the bailment and not being made in market overt or within the Factor's Acts. *X* purchases in good faith, and has no notice of *A*'s rights.

(b) *B* holds goods as trustee of *A*'s marriage settlement. In breach of trust, *B* sells them to *X*; *X* buys in good faith, and has no notice of the trust.

5. State shortly the facts of, and explain the principle laid down in,—

*Pearry Mohan Mukherjee v. Manohar Mukherjee*, L.R. 49 I.A. 268.

Or,

*Allcard v. Skinner*, L.R. 36 Ch. D. 145.

## SECOND HALF

Examiners— $\left\{ \begin{array}{l} \text{MR. P. K. CHAKRABATRI, M.A., B.L.,} \\ \text{BARRISTER-AT-LAW.} \\ \text{,, GOPENDRANATH DAS, M.A., B.L.} \\ \text{,, B. C. KAR, M.A., B.L., BARRISTER-AT-LAW.} \end{array} \right.$

1. 'Satisfaction presupposes an obligation—there must be something to be satisfied, and a completed gift leaves nothing to be satisfied. But a legacy may be adeemed either by a completed gift or by the acceptance of an obligation.' Explain, giving illustrations.

Or,

*X* is tenant in fee simple of Blackacre. A testator says, 'I devise Blackacre to *Y* and I bequeath to *X* a legacy of £1,000.' Blackacre is worth but £500. *X* says, 'Blackacre is mine and I am not going to abandon it,' and also claims the legacy. To what extent can *X*'s claim to the legacy be entertained?

2. A, by his will, leaves land to trustees upon trust to sell and divide the proceeds between B and C. B survives the testator, C does not. The trustees sell the land, and give B a moiety of the price according to the will. Who will get the other moiety—A's heir-at-law or his next of kin? Give reasons for your answer.

8. Explain the rule that 'a provision or stipulation which will have the effect of clogging or fettering the equity of redemption is void.' Discuss whether the decision in *Kreglinger v. New Patagonia Meat, etc. Co.*, (1914) A.C. 25 is consistent with the previous cases.

4. A agrees by a written instrument to grant B a permanent lease of land. The instrument is not registered, but B goes into possession, and erects costly structures to A's knowledge. A then refuses to grant B a permanent lease. B brings no suit for specific performance, and his right to bring such a suit becomes barred. A then treats B as a monthly tenant and serves upon him a notice to quit.

Can B be evicted?

Or,

A lends money to B, a solicitor, on security of a legal mortgage of freeholds and with the mortgage gets possession of the title deeds. A then lends the title-deeds to B on a fraudulent representation by him that he desires to prepare an abstract of title and conditions of sale in order to sell and pay of the debt. B then borrows a further sum from C, depositing the deeds with him as security—and soon after absconds. The property will only suffice to pay A or C. Is A's security postponed to C's? What is the rule as to loss of priority? Would A's position be different if his mortgage had been an equitable one merely?

5. Explain the principle laid down in—

*Stapilton v. Stapilton*, 1 A&K. 2.

Or,

*Ram Coomar Koondoo v. Mac Queen*, L.R. I.A. Supp., Vol. 40.

## EVIDENCE AND CIVIL PROCEDURE

Examiners—{ MR. MANMATHANATH RAY, M.A., B.L.  
,, RATANMOHAN CHATTERJEE, M.A., B.L.  
,, SUSILKUMAR BOSE, M.A., B.L.

Paper-Setters—{ DR. S. C. BASAK, M.A., D.L.  
MR. MANMATHANATH RAY, M.A., B.L.

### THIRD PAPER

*The questions are of equal value*

*Only FIVE questions to be attempted in EACH half*

### FIRST HALF

1. Discuss, by reference to a leading case, whether a judgment in a former suit is admissible in evidence under the provisions of the Indian Evidence Act.

2. State the different cases in which, under the Indian Evidence Act, opinions of third persons are relevant.

3. 'What is in writing, shall only be proved by the writing itself.' Discuss the exceptions to this rule.

4. Discuss the leading principles which regulate the burden of proof.

5. Discuss, with reference to the provisions of the Indian Evidence Act, whether it is open to a tenant to plead non-liability to pay rent to the landlord, on the ground of eviction by title paramount.

6. 'The best evidence must always be given.' Explain the maxim, and point out its chief applications in the law of evidence.

7. Write a note on the circumstances which effect an enlargement of the period of limitation.

8. 'There can be no discontinuance by absence of use and enjoyment, when the land is not capable of use and enjoyment.' Discuss by reference to the facts and the decision of a leading case.

### SECOND HALF

Examiners—{ MR. SARATCHANDRA MOOKERJEE, M.A., B.L.  
 „ NANDAGOPAL BANERJEE, M.A., M.L.  
 „ ABUL HUSSAIN, M.A., M.L.

1. 'One must be careful to distinguish *exercise of jurisdiction* from *existence of jurisdiction*.' Explain.

An order for withdrawal of a suit with leave to institute a fresh suit is made in circumstances not within the scope of the rule laid down in the Code of Civil Procedure. Discuss whether such an order is made without jurisdiction.

2. Discuss whether a decision on (1) a question of fact, and (2) a question of law, operates as *res judicata* between the parties to the suit.

3. Some Mahomedans intend to bring a suit praying that certain properties may be declared to be Wakf properties and that the defendants who are strangers to the trust may be restrained from obtaining possession of them. Discuss, giving reasons whether the sanction of the Advocate-General is necessary for the maintainability of the suit.

4. Discuss, by reference to a leading case, whether it is necessary for a party aggrieved by the preliminary decree to appeal both from that decree and the final-decree in order to maintain his appeal against the preliminary decree.

5. A suit is dismissed for default. What are the remedies open to the plaintiff? State, giving reasons, whether he can appeal against the order of dismissal.

6. Who may be joined (i) as plaintiffs, and (ii) as defendants, in one suit? State the cases in which the plaint shall be rejected.

7. Write a note on the provisions of the Code of Civil Procedure relating to investigation of claims and objections to attachment of property in execution of a decree.

8. State the special procedure provided in the Civil Procedure Code when a party is a minor. How should the plaintiff proceed on the death of a defendant?

## CRIMINAL LAW

Examiners—{ MR. CHANDRABHUSHAN BANERJEE, B.L.  
 ,, MANINDRANATH BANERJEE (Sr.), M.A., B.L.  
 ,, J. BAROOAH, BARRISTER-AT-LAW.

Paper-Setters—{ THE HON'BLE MR. JUSTICE MANMATHANATH  
 MUKHERJEE, M.A., B.L.  
 MR. N. K. BASU.

## FOURTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. Define 'Valuable security', 'Good faith', 'Voluntarily'. 10  
 Distinguish between 'Fraudulently' and 'Dishonestly'.  
 Give an instance where an act may be said to have been done fraudulently but not dishonestly, referring to any decided case that you know of.
2. How far does the Penal Code make a person liable for an act actually committed by another? 10
3. How far does the exercise of right of private defence of person extend against an innocent person? 10
4. Discuss the liability of 'A' in any five of the following cases :— 10
  - (a) A instigates B and C to break into an inhabited house at midnight for the purpose of robbery, and provides them with arms for that purpose. B and C break into the house, and being resisted by Z, one of the inmates, kill him.
  - (b) A, a constable, detains some persons as suspects for several days. They were not fettered, but were made to stay within certain circumscribed limits. They were allowed to go home for their meals, escorted by Chowkidars who brought them back.
  - (c) A, a kaviraj uneducated in matters of surgery, operated on a patient for internal piles by cutting them out with an ordinary knife. The patient died of haemorrhage.
  - (d) A kills a Brahmin bull, that is a bull set at large after a Hindu Shradh.
  - (e) A enters into the house of B at night to carry on intrigue with B's widowed sister, who is an adult.
  - (f) A, an accountant in B's firm, alters certain accounts of the firm to remove evidence of misappropriation of moneys committed by him.
  - (g) A sends a piece of machinery for repairs to a firm. On the execution of the work, the firm demands Rs. 75 as costs. A refuses to pay more than Rs. 50. There is a quarrel. A puts down Rs. 50 and walks away with the machine.
5. Distinguish between Direct and Circumstantial evidence. 10  
 'There can be no such thing as circumstantial evidence at all.'  
 Discuss this proposition



## SECOND HALF

Examiners—{ MR. SYAMAPADA RAY, BARRISTER-AT-LAW.  
 „ BANBEHARI DAS, M.A., B.L., BARRISTER-  
 „ GOPALCHANDRA MOOKERJEE, M.A., B.L. AT-LAW.

1. What are the duties and liabilities of a private person to assist Magistrates and Police Officers ? 5

Or,

When can a search warrant be issued ?

2. Can a Chief Presidency Magistrate transfer a case from the file of an Additional Chief Presidency Magistrate? Give reasons. 5

Or,

Discuss the Validity of a commitment to a Court of Session by a Magistrate not empowered to commit.

3. Discuss briefly the principles deducible from either of the two cases :— 10

*Abdul Rahman v. King-Emperor*, 54 I.A. 96.

*Begu v. King-Emperor*, 52 I.A. 191.

4. Can the following persons be tried jointly?— 10

(a) The principal offender and his abettor.

(b) Persons who give false evidence as witnesses in the same case.

(c) Receivers of stolen properties from different persons at different times.

(d) Four persons charged with the murder of A, two out of the four charged with the murder of B, one of them further charged with committing mischief by fire.

(e) Persons accused of different offence of the same kind committed within a period of twelve months.

5. When is previous conviction a bar to a subsequent trial ? 10

Or,

To whom does an appeal lie from a conviction by a Magistrate, who was empowered to exercise the powers of a Magistrate of the 1st class after the taking of evidence in the case had been finished but before delivery of the judgment?

6. Discuss the English Law as to insanity as a defence in criminal cases, referring in particular to *Dove's* case. 10

# M. L. Examination

1933

## JURISPRUDENCE AND LEGISLATION

*Examiner*—MR. S. C. CHAUDHURI, M.A., LL.B.

*The questions are of equal value*

*Not more than FOUR questions need be answered*

*Candidates shall give their answers in their own words, as far as practicable, in all subjects*

1. "The Courts are the real authors of the law." (*Gray*).  
"Law is the aggregate of rules recognized and acted on by Courts of justice" (*Salmond*).  
Consider the above statements and state with precision your own conception of Law. How far, if at all, you are prepared to regard law as the expression of class-selfishness?
2. "Custom is the embodiment of the principles which have commended themselves to the national conscience as principles of truth, justice and public utility" (*Salmond*).  
"The conclusion at which I arrive erects present existing custom as the standard of law" (*Carter*).  
Examine the above propositions.
3. "No law can be unjust." (*Hobbes*).  
"Law is a minimum ethics" (*Jellinek*).  
Define clearly the relation between Law and Morals. How far, if at all, is the jurist concerned with any ideal standard of either?
4. "Rights are legally protected interests" (*Ihering*).  
Discuss. Examine the validity of the division of a right into two sides made by this jurist.  
Can there be legal duties without legal rights?
5. Describe the principal types of village communities found in India, and discuss how far they agree with the European types.
6. "Legislation has the same centre with morals but it has not the same circumference" (*Bentham*).  
Comment on the above statement.
7. Some jurists maintain that a corporation is not only a real thing but that it has a real will.—Explain the arguments by which this theory is supported and criticize them, stating clearly the position which you maintain to be correct.
8. "The doctrine of the identity of the will of the people as expressed both in the customs and legislation of democratic societies is wholly fictitious" (*Korkunov*). Justify or impugn the statement, supposing it to have a reference to Indian customary law.
9. "During the nineteenth century it was rather fashionable for speculative writers to assume that the Roman doctrine of Possession was more complete and scientific than our own.....But there is no reason for believing that our Germanic ideas of seisin, from which our native doctrine has sprung have in them less of the true root of the matter." (*Pollock*).

Explain and examine the various theories of Possession.

Or

" Possession is the objective realization of ownership " (*Ihering*).

Explain the above and carefully analyse the concepts involved.

10. " Three great countries, England, France, and Germany began their political life from a similar agricultural basis. In each of them the great conflict was between community and immunity, demesne land and tenant land, the manor and the peasant."

Discuss and explain whether India presents any analogy in this matter.

11. " The reality of punishment is only necessary to maintain the appearance of it." (*Bentham*).

Discuss the various theories of punishment.

12. Develop and criticize the following dictum :—

" The movement of progressive societies has hitherto been a movement from status to Contract." (*Maine*).

## PRINCIPLES AND HISTORY OF ROMAN LAW

Examiner—DR. S. C. BAGCHI, B.A., LL.D., BARRISTER-AT-LAW

*The questions are of equal value*

*FOUR questions and no more need be attempted*

1. " The jurists of the classical age are the real builders of the great fabric of Roman Law "—*Buckland*.

Discuss and state briefly the main points of interest in the history of the early Roman jurists.

2. " The *Jus Rerum* of Justinian is not the general part of the law as opposed to that which can be most conveniently discussed in detached provisions." How does *Buckland* support this view?

3. Compare the law of suretyship in the time of *Gaius* with that under Justinian and consider specially the case of the surety being a woman.

4. " One of the most difficult problems with which the legislator has to contend is that of preventing frauds on the law "—*Ihering*. Illustrate this remark by instances from Roman legal history and consider whether such frauds have always been mischievous.

5. How and to what extent could a man's near of kin assert a right to share in his inheritance? Was this right affected by the fact that the deceased had made substantial settlements on them in his life time? Could they protect themselves against dispositions of his property, adverse to their claims, made by him in his life-time?

P in the time of Justinian died leaving him surviving a widow, a son Q, a brother R and no other kin. By his will P disinherited Q on adequate grounds and appointed as joint heirs his widow and his physician : the only legacy was a small one in favour of R. Shortly after P's death it was discovered that his death had been caused by poison wickedly administered by Q and the physician. Consider the case in all its bearings.

6. Where the classical lawyers said *datur actio*, the compilers of the Digest sometimes substitute *competit actio*. To texts expressing a liability in the *heres* they sometimes add *et ceteris successoribus*. In stating the interdict

*unde vi* they substitute for *restituas* the words *judicium dabo*. What are the causes of these changes?

7. Write a short essay on "The Greek Element in the classical Roman Law."

## HINDU LAW

*Examiner*—THE HON'BLE MR. JUSTICE DWARKANATH MITTER,  
M.A., D.L.

*The figures in the margin indicate full marks*

1. Two brothers, governed by the Mitaksara law, died. To one a posthumous son was born; subsequently the widow of the other, by the authority of her deceased husband, adopted a son to him. What under the Hindu law would be the share of the adopted son and the son of his adoptive father's brother respectively on a partition of the joint family ancestral estate between the two sons? Discuss the question with special reference to the views of the Author of the Dattaka Chandrika. Refer to any leading decisions on the point that you can think of. 20

2. "The successor to an ancestral impartible estate in a Hindu joint family governed by the Mitaksara is designated by survivorship, although he will hold the estate according to the custom of impartibility." Examine this statement of the law with reference to the judgment in Sartaj Kuari's case L.R. 15 I.A. 51 tracing the developments directly attributable to this judgment. 20

3. Discuss with reference to leading cases the effect upon the reversioner (a) of hostile judgments obtained against a female heir, and (b) of dispossession of her estate as raising the bar of the Statute of Limitation. 20

*Or*

Discuss the law as to the right of a woman to accumulations from the estate of the last male holder.

4. Explain the term "Bandhu" as used in the Mitaksara. What is the position of Bandhus in the order of succession under the Benares School? Explain how their position has been improved by the author of Dayabhaga. 20

*Or*

Discuss with reference to leading cases the liability of a son in a Mitaksara joint family for the debts of his father charged upon ancestral property.

5. Write a short thesis on any one of the following subjects:— 20

(a) The scope and limits of the doctrine of surrender of a Hindu widow's estate.

(b) The limits to the exercise of a power to adopt possessed by a Hindu widow.

## PRIVATE INTERNATIONAL LAW

*Examiner*—MR. P. K. SEN, M.A., LL.M., BARRISTER-AT-LAW

*Candidates are required to answer any FIVE questions*

*The questions are of equal value*

1. Discuss the incidents of "domicil of origin" as distinguished from those of "domicil of choice," illustrating your points by leading cases and referring to the principles laid down therein.

2. "A bequest in an English will to the children of A means to his legitimate children, but the rule of construction goes no further. The question remains 'who are his legitimate children?' That certainly is not a question of construction of the will. It is a question of status. By what law is that status to be determined?" Answer, citing authorities and elucidating the principles involved.

*Or*

"The universal doctrine now recognised by the common law, although formerly much contested, is that succession to personal property is governed exclusively by the law of actual domicil of the intestate at the time of his death." Explain with the help of leading cases.

3. Discuss the effect of a Scotch divorce upon an English marriage where the married parties do not afterwards become domiciled in Scotland, nor have resorted thither with the design of invoking jurisdiction of the Court, but where happening to be in the country one of them applies for and obtains a decree of divorce. Support your answer with judicial decisions.

4. "A foreign marriage, valid according to the law of a country where it is celebrated, is good everywhere." Discuss the limitations, if any, of the rule, citing authorities.

*Or*

A marriage is duly solemnized in England, in the manner prescribed by the law of England, between parties of full age and capable of contracting according to that law. The parties to that marriage contracted it in England in order to evade the laws of the country in which they were domiciled. Will the marriage be held valid? Give grounds for your answer, citing authorities.

5. Has an English or Indian Court jurisdiction to stay an action, or restrain proceedings in a foreign court? Discuss the principles underlying the law on the subject, citing leading cases in support.

6. "It is generally agreed that the law of the place where a contract is made is *prima facie* that which the parties intended, or ought to be presumed to have adopted, as the footing upon which they dealt, and that such law ought therefore to prevail in the absence of circumstances indicating a different intention." Explain, giving illustrations from decided cases.

7. Can a foreign Sovereign sue or be sued in an English Court? Illustrate your answer by leading cases.

## PRINCIPLES AND HISTORY OF THE LAW OF EVIDENCE

*Examiner*—THE HON'BLE MR. JUSTICE DWARKANATH MITTER,  
M.A., D.L.

*The figures in the margin indicate full marks*

1 (a) Comment on the maxim "Hearsay is not evidence." Explain the correct meaning of the maxim. Enumerate the principal ex- 20

ceptions to the rule embodied in the maxim. Indicate the reasons on which the exceptions are founded.

(b) Discuss the presumptions relating to ancient documents.  
2 (a) "The real character of the doctrine of *resjudicata* has been, to some extent thrown into the back ground in England by its treatment as a branch of the law of estoppel Develop. 20

(b) Cite any texts from the Hindu Smritis or commentaries regarding the doctrine of *resjudicata*.

3. Trace the development of the law of British India relating to the nature and extent of the burden of proof in case of deeds and powers executed by *Purdanashin ladies*. Discuss the principle on which the law is founded. Refer to leading decisions on the subject. 20

4 (a) Discuss with reference to leading cases the question as to the admissibility in evidence of judgments not *inter partes*. Are findings in judgments not *inter partes* evidence? Refer to leading cases on the point. 20

(b) "The court may presume the existence of any fact which it thinks likely to have happened, regard being had to the common course of natural events, human conduct and public and private business, in their relation to the facts of a particular case" Sec. 114, Evidence Act. Give illustrations.

Or

(a) Discuss the modes in which estoppel may arise under English law. State the rule of estoppel as embodied in Sec. 115 of the Indian Evidence Act.

(b) Is there any estoppel where the truth of the thing is known to both parties? Is there any estoppel where parties are in *pari delicto*? Give reasons for your answer.

5 (a) What do you understand by the term *Resgesta* 20

(b) As applied to judicial proceedings the phrase "burden of proof" has two distinct and confused meanings—Phipson, Develop.

Or

(a) Enumerate the matters which are protected from disclosure or production on the ground of privilege under the Indian Evidence Act.

(b) Are University Calendars admissible to prove the truth of the particulars contained therein.

## TRANSFER OF PROPERTY AND LAW OF PRESCRIPTIONS

Examiner—THE HON'BLE MR. JUSTICE LALGOPAL MOOKERJEE,  
KT., B.A., LL.B.

Not more than six questions are to be attempted

Each question carries 15 marks, 10 marks are reserved for penmanship and neatness of the answers including style and method. Out of questions 9 to 12 not more than 2 are to be attempted.

1. (a) What do you understand by the expression 'Rule against perpetuity'? Why is the rule so called? Is there any and what exception to the rule? Why is there any exception at all?

(b) How far is a contract to transfer property affected by the rule against perpetuity? Is there any difference on this point between English and Indian Law? Discuss both.

2. (a) What do you understand by the expression 'Equity of Redemption'? Why is this expression not to be found in the Transfer of Property Act?

(b) When A mortgages his property after he has once mortgaged the same, does he mortgage his 'Equity of Redemption'; if not, what does he mortgage? Is the 'Equity of Redemption' a transferable property? If it be transferable, what is your authority for that?

3. Why is a transferee in good faith for consideration a favourite with the law givers? Is there any equitable estate in India? If so give an illustration. If not, why?

4. Why is a transfer by a party to a litigation not allowed to have effect as against the other transferee? Suppose the transferee is a *bona fide* one for consideration and without notice of the litigation? Does he get a good title? If so, why and if not, why? Discuss the principle underlying the rule of lis pendens.

5. What is a 'vendor's lien'? Is that a correct expression under the Indian Law? A sale deed is registered but the vendee does not pay the price. The vendee sues for possession? Is non-payment of the price a good defence? Can a decree be made in favour of the plaintiff, on condition of payment by him of the purchase money? Discuss the law fully.

6. (a) What is the true nature of a 'mortgage'? Is there a difference between the Indian and English conception of a mortgage? If so what?

(b) What is the difference between a charge and a mortgage? What is the most important result of this difference?

7. What are the powers of a mortgagee in possession to make an improvement? Is there any and what conflict between the law as laid down in the T. P. Act and S. 90 of the Indian Trusts Act? Do you know of any latest pronouncement of Their Lordships of the Privy Council on the point? If so discuss the case?

8. Define and discuss the law of subrogation, and show how far this law and the law of contribution are related to each other.

9. (a) What do you understand by a 'right of easement'? Can a prescriptive right of easement be acquired without litigation? Give reasons for your answer?

(b) What is an easement of necessity? Explain and give an illustration.

10. What are natural rights? Why are they so called? Give some illustrations.

11. What is the difference between a lease and a license? Give illustrations to explain your reasons.

12. What is the principle of 'lost grant'? Discuss the same in your own words and give illustration.

# Preliminary Scientific M. B. Examination,

## April, 1933

### INORGANIC CHEMISTRY AND ORGANIC CHEMISTRY

<i>Examiners—</i>	{	MR. BENIMADHAB CHAKRABARTI, L.M.S.	
		„ P. C. RAY, M.A.	(Convener).
		DR. M. QUDRAT-I-KHUDA, D.Sc.	
		„ SUDHAMAY GHOSH, D.Sc. (E), F.R.S. (E), F.C.S.	

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

#### FIRST HALF

1. State what you know about the Ionic Theory, and explain how it has helped us in analytical work, both qualitative and quantitative.
2. What are the normal constituents of atmospheric air? How would you show their presence? How would you test for the common impurities present in air?
3. What is hydroxylamine? How is it prepared? Give its characteristic properties and uses.
4. Describe the preparation, properties, and uses of the following substances :—  
(a) Boric Acid, (b) Zinc Chloride, (c) White Lead, (d) Barium Sulphate.

#### SECOND HALF

1. What do you understand by the Periodic Classification of Elements? Explain how it is helpful in the systematic study of chemistry.
2. Explain the following terms with examples :—  
(a) Metalloids, (b) Dialysis, (c) Electrolysis, (d) Radio activity.
3. What is laughing gas, and why is it so called? How would you proceed to prepare it in a pure condition? Give its properties and uses.
4. 50 c.c. of a solution of a chloride required 12.05 c.c. of a normal solution of Silver Nitrate for complete precipitation of AgCl. Calculate the percentage of chloride as sodium chloride in the given solution.



*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

### FIRST HALF

1. You are given an aqueous solution of acetic acid, ethyl alcohol, and glycerine. State how you would proceed to isolate each of them in a pure state, and also how you can estimate the amount of acetic acid.

2. Explain the following terms with *two* examples of each: (a) Mercaptans, (b) Amino acids, (c) Phenols, (d) Esters.

3. What do you understand by the term Invert Sugar? Why is it so called? Give details regarding the preparation and properties of one of its constituents.

4. What are the following?—

(a) Antifebrin, (b) Oil of Bitter Almonds, (c) Benzine, (d) Aspirin.

How are they obtained, and what are their uses?

### SECOND HALF

1. What are anæsthetic and antiseptic substances? Give the names of two of the more important members of each of these two classes of compounds with their preparation and properties.

2. Write short notes on the following: (a) Hydrolysis, (b) Fermentation, (c) Sulphonation, (d) Polymerisation. Give at least one example in each case.

3. What are the products obtainable by treating alcohol with sulphuric acid under different conditions? Explain the reactions involved, and describe the properties of the substances produced.

4. What are the more important nitrogenous organic substances present in opium? How are they isolated? Mention some of their important reactions and uses.

### PHYSICS

Examiners- { MR. TULSIDAS KAR, M.A. (*Convener*).  
DR. M. M. RAY, D.Sc.  
MR. NIBARANCHANDRA RAY, M.A.  
DR. SNEHAMAY DATTA, D.Sc.

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

### FIRST HALF

1. Calculate the excess of pressure of the air inside over the air outside a soap bubble of radius  $r$ , when the surface tension of the soap solution is  $T$ . Describe an experiment to measure the surface tension, using the above principle.

## 2. Define osmotic pressure.

Briefly describe one direct and one indirect method for measuring the osmotic pressure of a solution.

3. Give a brief description of the general structure of the human ear, and explain the resonance theory of hearing.

4. Define calorific value. Describe an accurate experiment for finding the calorific value of a solid, deducing the formula.

5. Define the magnifying power of a compound microscope. Obtain an expression for it in terms of known quantities. Show briefly how this magnifying power is practically found.

## SECOND HALF

6. Explain the construction and the use of Nicol's prism. How can you test with it whether a beam is completely or partially polarised?

7. What do you understand by chromatic aberration?

Deduce the condition that must be satisfied by an achromatic eyepiece.

8. Explain the terms conductivity and resistivity. What are the units for their measurement? Describe an experiment for measuring the resistivity of a solution, giving the precautions to be taken.

9. What is meant by the pH scale? What are its advantages?

Explain the potentiometric method for measuring the pH of a solution.

10. Describe an arrangement for producing X-rays, giving a neat sketch. What must be the properties possessed by the metal that is used in the anti-cathode?

## BOTANY

Examiners— { DR. SAHAYRAM BOSE, M.A., Ph.D. (Convener).  
MR. SAILESWAR MUKHERJEE, L.M.S.  
,, SURENDRACHANDRA BANERJEE, M.A., B.Sc., F.L.S.  
,, KALIPADA BISWAS, M.Sc.

*The questions are of equal value*

## PART I

1. What are schizocarpic fruits? 50  
Describe the different types with examples.

*Or,*

2. Give the characteristics of the natural order *Leguminosae*. 50

## PART II

1. Describe the structure of an open collateral vascular bundle. 50

*Or,*

2. Describe with sketches the various kinds of cells. 50

## PART III

1. To what class of organisms do *Bacteria* belong? What are the different methods of reproduction?

Or,

2. Describe the structure of a *Moss* plant and its development from a spore. Illustrate with sketches.

## PART IV

1. What is root-pressure? How does it affect the transpiration-current?

Or,

2. What is respiration? Distinguish between aerobic and anaerobic respiration.

## ZOOLOGY

Examiners	{	DR. EKENDRANATH GHOSH, M.Sc., M.D.
		(Convener).
		DR. TARAKNATH PODDAR, M.Sc., M.D.
		,, HIMADRIKUMAR MUKHERJEE, D.Sc. (Lond.).
	{	,, BAINI PRASAD, D.Sc.

Two questions to be attempted from each part

Each question carries 25 marks

Illustrate your answers with diagrams as far as possible

## FIRST PART

1. State what you know of the process of ordinary cell-division.
2. Discuss the importance of the study of Zoology to Medical Science.
3. Write an account of the Theory of Evolution.

## SECOND PART

1. Describe the life-history of *Monocystis*.
2. Describe the development of Coelome and state its functions.
3. What do you understand by alternation of generation? Illustrate your answer with examples.

## THIRD PART

1. Describe the excretory system of the Earthworm.
2. State the main characters of the *Phylum Arthropoda*, and enumerate its subdivisions with an example of each.
3. Write short notes on any five of the following :—

- (i) Proctodæum.
- (ii) Cerci.
- (iii) Cnidocil.
- (iv) Organ of Bojanus.
- (v) Typhlosole.
- (vi) Operculum.
- (vii) Urostyle.
- (viii) Glochidium.

## FOURTH PART

1. State the general characters of the Phylum Chordata, and enumerate its main subdivisions.
2. Compare the heart of *Toad* with that of *Guinea Pig*.
3. Make a drawing of the median-longitudinal section of the vertebrate eye and label the various structure.

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November, 1933

*The questions are of equal value*

*Only THREE questions are to be attempted from each half*

## FIRST HALF

1. How can you prepare a pure sample of potassium chlorate?

How much of this substance should be heated to yield the same amount of oxygen as would be obtainable from 500 gm. of mercuric oxide? (K=39.1, O=16, Hg=200.6, and Cl=35.46.)

2. What do you understand by the term 'halogen family'? Select two members of this family that are more important from the point of view of a physician. Give the reactions that take place during their preparation and also indicate the uses which they are put to.

3. Explain the changes that take place when—

(a) sulphur dioxide is passed through an aqueous solution of potassium permanganate;

(b) chlorine is led into a solution of ferrous sulphate;

(c) a solution of potassium iodide is poured into a jar containing ozone;

(d) concentrated sulphuric acid is added to a solution of potassium bromide.

4. How do you prepare pure samples of the following from calcium carbonate?—

(a) Calcium oxide.

(b) Bleaching powder.

(c) Plaster of Paris.

(d) Calcium carbide.

State the uses of the compounds prepared.

## SECOND HALF

1. Explain and illustrate the following :—

(a) Reversible reaction; (b) Dissociation; (c) Osmosis.

2. What are the impurities likely to be present in the following substances, and how would you detect their presence?—

(a) Potassium iodide; (b) Nitric acid; (c) Calomel; (d) Sulphuric acid.

What would be your method for preparing one of the above substances in pure condition?

3. Write short notes on the following :—

(i) Hard water; (ii) Soft water; (iii) Mineral water.

4. What are the different forms of phosphorous, and how are they prepared? Compare their properties.

Mention the names of the more important compounds of phosphorus that are of medical importance.

## ORGANIC AND INORGANIC CHEMISTRY

<i>Examiners—</i>	{	MR. BENIMADHAB CHAKRABARTI, I.M.S.	(Convener).
		DR. QUDRAT-I-KHUDA, D.Sc. (Lond.).	
		MR. M. K. SEN, M.Sc.	
		DR. SUDHAMAY GHOSH, D.Sc. (F.), F.R.S.(E.), F.C.S.	

*The questions are of equal value*

*Only THREE questions are to be attempted in each half*

### FIRST HALF

1. How would you determine the molecular weight of an organic substance by the Cryoscopic method? Calculate the molecular weight of a substance from the following data : 2 grams of the substance dissolved in 20 grams of water lowered its freezing point by  $1.033^{\circ}$  (molecular depression for water =  $18.6^{\circ}$ ).

2. How is acetone obtained on a large scale? Give its properties and characteristic reactions. You are supplied with a solution which may contain this substance. How would you proceed to detect it?

3. What are your arguments in favour of the present constitutional formula for tartaric acid? How is it obtained?

4. How are the following prepared in the laboratory?—

(a) Chloroform; (b) Phenol; (c) Acetanilide.

Give the reactions that take place during their preparation. Indicate their properties and uses, if any.

### SECOND HALF

1. Write short notes on the following, illustrating your answer with two examples of each :—

(a) Para-compounds; Homologous series; (c) Heterocyclic compounds.

2. What are hydroxy acids? Describe the properties and preparation of a hydroxy acid of the aromatic series.

3. How will you proceed to detect the presence of nitrogen in an organic substance? You are supplied with some powdered seeds which contain strychnine. How would you proceed to isolate the substance and decide that it is strychnine?

4. What is a di-saccharide, and why is it so called? Give the names of two compounds of this class and compare and contrast their reactions and properties.

## PHYSICS

Examiners— $\left\{ \begin{array}{l} \text{MR. T. D. KAR, M.A. (Convener).} \\ \text{DR. M. M. RAY, D.Sc.} \\ \text{MR. NIBARANCHANDRA RAY, M.A.} \\ \text{DR. SNEHAMAY DATTA, D.Sc.} \end{array} \right.$

*The questions are of equal value*

*Only THREE questions to be attempted in each half*

## FIRST HALF

1. Explain the construction and adjustments of Fortin's Barometer. What is meant by its temperature correction? Deduce an expression for it.
2. Describe a method for the direct measurement of the osmotic pressure of a solution.  
Calculate the osmotic pressure at  $0^{\circ}\text{C}$ . of a 5 per cent. solution of glucose. (Molecular wt.=180.)
3. State the laws of vibrations of a stretched string, and explain how they can be experimentally verified.
4. Define Boiling Point of a liquid. Explain how you can accurately find the boiling point of a solution. What are the precautions to be taken?
5. An object is placed at a distance  $d_1$  from the pole of a thick convex lens and then moved to a distance  $d$ . If the image is magnified  $m_1$  and  $m_2$  times respectively, calculate the focal length of the lens.

## SECOND HALF

6. Define power of a lens. What is the unit used? Explain the theory and the method for accurately finding the power of a concave lens.
7. What do you understand by the optic axis and the principal section of a crystal?  
Explain any method for testing a thin plate for double refraction.
8. Define resistivity.  
Explain the method of finding the resistivity of the material of a wire with the metre bridge, deducing the formula.
9. State and explain Faraday's laws of electrolysis.  
Describe an experiment for finding the E.C.E. of copper.
10. Give a neat sectional diagram of Ruhmkorff's Induction coil, and explain its action fully.

## BOTANY

Examiners— $\left\{ \begin{array}{l} \text{DR. SAHAYRAM BOSE, M.A., Ph.D. (Convener).} \\ \text{MR. SAILESWAR MUKHERJEE, L.M.S.} \\ \text{,, SURENDRACHANDRA BANERJEE, M.A., B.Sc.,} \\ \text{F.L.S.} \\ \text{,, K. P. BISWAS, M.Sc.} \end{array} \right.$

*Candidates shall give their answers in their own words  
as far as practicable*

*The questions are of equal value*

*Only ONE question is to be attempted from each part*

## PART I

1. How do you distinguish (a) *Phyllode* from *Phylloclade*, and (b) a compound leaf from a short branch? 50

2. Describe the various kinds of placentation in Angiosperms. 50  
Illustrate your answer with sketches.

## PART II

1. Describe the life-history of *Marchantia* with neat sketches. 50  
2. What reproductive structures are met with in a *Moss* plant? 50  
Describe them with sketches.

## PART III

1. Give the characteristic features of the Nat. Ord. *Apocynaceae*. 50  
2. What is a *procambium strand*? Describe its differentiation 50  
into Dicotyledonous Vascular Bundle.

## PART IV

1. Describe the structure of a *stoma*, and explain how it works. 50  
2. Give an account of the aeration of the plant body. 50

## ZOOLOGY

Examiners— { DR. EKENDRANATH GHOSH, M.Sc., M.D.,  
F.Z.S. (Convener).  
,, TARAKNATH PODDAR, M.Sc., M.D.  
,, HIMADRIKUMAR MUKHERJEE, D.Sc. (Lond.).  
,, S. L. HORA, D.Sc.

*The questions are of equal value*

*Two questions to be attempted from each part*

*Illustrate your answers with diagrams as far as practicable*

## FIRST PART

1. State what you know of the principal differences between the living and non-living matter.  
2. Describe the formation of germ-layers in chick-embryo after the segmentation of the ovum.  
3. What do you know of Mendel's law?

## SECOND PART

1. Describe the modes of reproduction in *Paramecium*.  
2. Point out the differences in the structures of a Coelenterate and a Coelomate animal.  
3. Give a short account of Cyclop and its relation to Guinea worm disease.

## THIRD PART

1. Describe the excretory system of fresh water prawn (*Palæmon*). To which Phylum does this animal belong?

2. Draw a neat sketch of the digestive system of the fresh water mussel (*Lamellidens*) and label the various parts.

3. Write short notes on *any five* of the following :—

- (1) Sporozoite.
- (2) Nematocyst.
- (3) Metamorphosis.
- (4) Obelia.
- (5) Atlas.
- (6) Duodenum.
- (7) Metabolism.
- (8) Stomodæum.

## FOURTH PART

1. Describe the circulation through the heart and conus arteriosus of toad.

2. Describe the pectoral-girdle of *Ruhu*.

3. Enumerate the cranial nerves and their distribution in Guinea pig.

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# First M. B. Examination,

April, 1933

## ANATOMY

<i>Examiners-</i>	{	RAI NANILAL PAN, BAHADUR, M.B. ( <i>Convener</i> ).
		MR. MANINDRANATH BOSE, M.B.C.M. (Edin.).
		„ PREMNIHAR RAY, M.B., F.R.C.S. (Eng.).
		CAPT. DINESCHANDRA CHAKRABARTI, F.R.C.S.E.
		MR. NAGENDRANATH CHATTERJEE, M.B.

### FIRST PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

1. Describe the insertion of tendons of muscles of the middle finger, and include a description of the digital sheath in connection with it. 65
2. Name the layers of soft parts covering the vault of the skull, and describe the arteries of the scalp. 60  
What is the danger zone in this region?

#### SECOND HALF

1. Describe the Corpora Quadrigemina with their connections and development. 65
2. Describe the communications between the Portal and Systemic veins. 60

*Or*

- Describe the Pulmonary Artery as far as its bifurcation. Give an account of its relations, and state what you know of its development. 60

### SECOND PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

1. Describe fully the Inguinal and Subinguinal Lymph glands. 65
2. Describe the medial wall of the Orbit. 60

#### SECOND HALF

1. Describe the Synovial Stratum of the knee joint. 65
2. Describe step by step the dissection for the exposure of the Prostate from the perineum. 60

**Or,**

Draw a diagram of a transverse section through the middle of the right thigh, indicating the relative position of the different structures exposed.

## PHYSIOLOGY

**Examiners—** { PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
—(*Convener*).  
CAPT. PREMANKUR DE, M.B., B.Sc.,  
M.R.C.P.(E).  
MR. MADANMOHAN DATTA, L.M.S.  
PHANINDRANATH BRAHMACHARI, M.Sc., M.B.

## FIRST PAPER

**Answer only TWO questions from EACH half**

**The questions are of equal value**

## FIRST HALF

1. Describe the minute structure of the Cerebellum, and explain its rôle in synergic movements.
2. Describe minutely the structure and functions of the membranous cochlea.
3. Draw a diagram, showing the different structures met with in a section passing through the middle of the medulla oblongata.

## SECOND HALF

1. What is meant by the output of the heart? Describe a method for the measurement of the cardiac output in man.
2. Describe minutely the structure and functions of red bone marrow.
3. Write short notes on the following :—
  - (a) Secretin.
  - (b) Creatinine.
  - (c) Urobilin.
  - (d) Heparin.
  - (e) Rhodopsin.

## SECOND PAPER

**Answer only TWO questions from EACH half**

**The questions are of equal value**

## FIRST HALF

1. Give an account of the sacral autonomic nerves.
2. Write an account of the functions of the kidney tubules. Give evidence in support of your answer.

3. Give the recent interpretation of the mechanism of the coagulation of the blood.

### SECOND HALF

1. Discuss the influence of endocrine organs on carbo-hydrate metabolism.

2. What is the source of body heat? Explain how a normal temperature of the body is maintained.

3. Describe the mechanism of the exchange of gases in tissues.

**November, 1933**

### ANATOMY

Examiners- { RAI NANILAL PAN, BAHADUR, M.B. (*Convener*).  
 Mr. M. N. BOSE, M.B.C.M. (Edin.).  
 CAPTAIN DINESCHANDRA CHAKRABARTI, F.R.C.S.(E).  
 MR. PREMNIHAR RAY, M.B., F.R.C.S. (Eng.).

### FIRST PAPER

*The figures in the margin indicate full marks*

1. Describe the Thyroid gland, giving its relations. How is it developed? 65
2. Describe the Superior Vena Cava. How is it developed? 60

### SECOND HALF

1. Describe the Tela Choroidea of the 3rd Ventricle, with special reference to the blood vessels found in it. 65
2. Draw the appearance of a transverse section of the leg through the middle of the Tibia. 60

*Or,*

Describe the Superior Radio-ulnar articulation, giving its exact relations.

### SECOND PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

1. Describe the origin, course, and relations of the Ulnar Nerve. Give its distribution in the palm. 65
2. Describe fully the Femoral Sheath. 60

## SECOND HALF

1. Describe the dissection for the exposure of the third part of the Subclavian artery. 65
2. Describe the Sigmoid Colon and its mesentery. What is its nerve supply? 60

Or,

Write what you know of the Superficial Perineal pouch.

## PHYSIOLOGY

<i>Examiners—</i>	{	PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.
		(Convenor).
		CAPT. PREMANKUR DE, M.B., B.Sc.,
		M.R.C.P.(F).
		MR. M. M. DATTA, L.M.S.
		„ PHANINDRANATH BRAHMACHARI, M.Sc., M.B.
		DR. RUDRENDRAKUMAR PAL, M.B., M.Sc.,
		M.R.C.P., D.Sc.
		MR. S. K. SEN, B.Sc., M.B., L.M., D.T.M.,
D.P.H.		

## FIRST PAPER

*The questions are of equal value*

*Answer only two questions from each half*

## FIRST HALF

1. Discuss the influence of internal secretions on the reproductive organs.
2. Write an essay on calcium metabolism, mentioning the rôle of endocrine organs and vitamins in particular.
3. Discuss the origin and ultimate fate of glycogen in the system.

## SECOND HALF

1. Give a brief account of the origin and significance of the nitrogenous constituents of urine.
2. Describe briefly the circulation in the following organs :—
  - (a) Liver.
  - (b) Kidney.
3. Give the physiology of the carotid sinus.

## SECOND PAPER

*The questions are of equal value*

*Answer only two questions from each half*

## FIRST HALF

1. Describe the control of the respiratory centre.
2. Describe briefly the composition of gastric juice. Explain the mechanism of gastric secretion.

8. Write short notes on :—

- (a) Paralytic secretion.
- (b) Ketosis.
- (c) Kinæsthetic Impulse.
- (d) Visual field.
- (e) Rigor Mortis.

#### SECOND HALF

1. Describe the minute structure of the cortex of the cerebrum and the functions of the different laminae.
  2. Describe the various modes of termination of nerve fibres.
  3. Describe the innervation and function of the iris.
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# Second M. B. Examination,

April, 1933

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## PHARMACOLOGY AND MATERIA MEDICA

*(Including Pharmacological Chemistry and Pharmacy)*

Examiners— { DR. PRAMATHANATH NANDI, M.D. (*Convener*).  
LT.-COL. R. N. CHOPRA, M.A., M.D. (Cantab.),  
I.M.S.  
MR. BIRENDRANATH GHOSH, F.R.F.P. & S.  
(Glas.)  
,, JATINDRACHANDRA AICH, M.B., M.R.C.P.  
(Edin.)

*Only two questions in EACH half to be answered*

*The questions are of equal value*

### FIRST HALF

1. Classify drugs acting on uterus, and discuss the action of the different active principles of Ergot.
2. Write short notes on :—
  - (a) Action of digitalis on the kidneys.
  - (b) Action of Nitrites on the circulatory system.
  - (c) Action of Acid Hydrocyanic Dil. on the stomach.
3. Classify the expectorants according to their mode of action, and compare the action of any two of them.

### SECOND HALF

4. Discuss the pharmacological action and therapeutic uses of Alcohol on circulatory system and metabolism.
  5. Write short notes on—
    - (a) Antagonism.
    - (b) Anthracene purgatives.
    - (c) Cholagogues.
    - (d) Chemotherapy.
  6. Enumerate the active principles of Cinchona, and describe their action and uses on the circulatory system.
-

## ELEMENTARY BACTERIOLOGY AND PATHOLOGY

<i>Examiners—</i>	{	Mr. CHARUCHANDRA BOSE, B.A., M.B.	<i>(Convener).</i>
		„ JITENDRANATH MAITRA, M.D.	
		„ M. N. DE, M.B., M.R.C.P. (Lond.).	
		„ A. C. UKIL, M.B.	

*The questions are of equal value*

## FIRST HALF

1. What do you mean by œdema? What are the various types of œdema met with in disease? Discuss briefly the pathology of œdema.

2. Describe the naked eye appearances that may be seen in the organs of a case dying of pulmonary tuberculosis.

*Or,*

Describe the appearances of *Corynebacterium diphtheriæ* in a smear from throat swab and from culture. How can you identify the micro-organism with certainty?

## SECOND HALF

3. What are phagocytes? Describe the part played by them in infection.

4. Enumerate the common protozoal parasites found in human intestines. Describe the morphology and pathogenesis of one of the most important of them.

*Or,*

Write short notes on :—

- (i) *Ascaris Lumbricoides*.
- (ii) *Filaria bancrofti*.
- (iii) Melanoma.
- (iv) Bacteriolysis.

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**November, 1933**

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## PHARMACOLOGY AND MATERIA MEDICA

(INCLUDING PHARMACOLOGICAL CHEMISTRY AND PHARMACY)

<i>Examiners—</i>	{	Lt.-COL. R. N. CHOPRA, M.A., M.D. (Cantab.),	<i>(Convener).</i>
		DR. PRAMATHANATH NANDI, M.D.	
		MR. BIRENDRANATH GHOSH, F.R.F.P. & S.	
		DR. HARIHAR GANGULI, M.D.	

*The questions are of equal value*

*Only two questions in each half to be answered*

## FIRST HALF

1. Write short notes on :—

- (a) Hexamine.
- (b) Chemotherapy.
- (c) Ephedrine.
- (d) Liver Extract.

2. Classify hypnotic drugs, and discuss fully their therapeutic uses.
3. Describe the absorption and excretion of mercury. Mention the preparations with their dosage of those which contain mercury in metallic form.

### SECOND HALF

4. Describe the relative advantages and disadvantages of subcutaneous, intramuscular, and intravenous injections of drugs.
5. Classify diuretic drugs, and describe their general mode of action.
6. What are the active principles of ipecacuanha? Describe fully their therapeutic uses.

## ELEMENTARY BACTERIOLOGY AND PATHOLOGY

( MR. CHARUCHANDRA BOSE, B.A., M.B.—  
(*Convener*).

Examiners— } DR. JITENDRANATH MAITRA, M.D.  
MR. M. N. DE, M.B., M.R.C.P.  
,, A. C. UKIL, M.B.

*The questions are of equal value*

### FIRST HALF

1. What is Infection? Describe briefly the immunological processes brought into play during an infection.
2. Describe the morphological appearances of *Entamoeba histolytica* and the lesions caused by it in the human body.

*Or*

Describe briefly the mode of infection and life-history of the hookworm. How would you establish a diagnosis of the infection by laboratory methods?

### SECOND HALF.

3. What do you mean by specific granulomata? Describe the naked eye and microscopic appearances of one of them.
4. How would you isolate and identify the causative organisms of Typhoid fever from the blood and stool of a patient?

*Or,*

Write short notes on the following :—

- (1) Filterable viruses.
- (2) Adenoma.
- (3) Cloudy swelling.



# Third M. B. Examination,

April, 1933

## FORENSIC MEDICINE

Examiners— { CAPTAIN DABIRUDDIN AHMED, O.B.E., L.M.S.,  
A.I.R.O.—(Convener).  
MR. A. N. SEN, M.B.  
LT.-COL. K. S. THAKUR, I.M.S.  
RAI BAHADUR DR. JOGENDRANATH MITRA, M.B.

*The figures in the margin indicate full marks.*

### FIRST HALF

1. Describe the post-mortem appearances of Drowning. What will make you suspect that a case of drowning was of homicidal nature ? 125

2. Describe the signs of virginity and their significance in connection with rape. 125

*Or,*

What is Infanticide ? Describe the usual means employed in India in committing infanticide.

### SECOND HALF

3. Describe the various kinds of wounds. What are the points you would note in examining a wound, and why ? 125

4. What are the signs and symptoms of Aconite poisoning ? How does poisoning by it occur ? Describe the treatment of poisoning by Aconite. 125

*Or,*

Describe the signs, symptoms, and treatment of Chronic Lead poisoning. How does poisoning of this nature usually occur ?

## HYGIENE AND PUBLIC HEALTH

LT.-COL. A. D. STEWART, M.B., CH.B.,  
F.R.C.S.E., D.T.M. & H., I.M.S.—  
(Convener).

SIR HASSAN SUHRAWARDY, KT., O.B.E., M.D.,  
F.R.C.S.I., D.P.H.

Examiners— MR. TARAKNATH MAJUMDAR, L.M.S., D.P.H.,  
D.T.M., F.C.S.

„ R. B. KHAMBATA, D.P.H., L.R.C.P.,  
M.R.C.S. (Eng.).

MR. B. B. BRAHMACHARI, M.B.

MR. B. N. GHOSH, F.R.F.P. & S. (Glas.).

*The questions are of equal value*

*Only two questions to be answered in EACH half*

### FIRST HALF

1. What are the effects of bad conditions of ventilation on the human system ?

To what conditions of the atmosphere may these effects be ascribed ?

How may one measure and express these atmospheric conditions ?

2. What are the diseases of lower animals which are transmissible to man ? Select any one of those diseases, and mention in detail the methods of prevention of that disease.

3. Mention the food articles in which the various vitamins are present. Mention the diseases which may be due to the absence of each of these vitamins.

### SECOND HALF

4. What worms infect the human system apart from the alimentary canal ? Give the life-history and mode of spread of one of these worms.

5. What do we mean by 'Endemic' and 'Epidemic' as applied to diseases ? Illustrate by reference to Bengal with regard to any three transmissible diseases.

6. What steps might be taken by you to reduce the incidence of tuberculosis in a small town in Bengal ?

**November, 1933**

### FORENSIC MEDICINE

Examiners—	{	CAPTAIN HAJI DABIRUDDIN AHMED, L.M.S.,
		V.H.S., O.B.E., A.I.R.O.—( <i>Convener</i> ).
		MR. A. N. SEN, M.B.
		LT.-COL. K. S. THAKUR, I.M.S.
		RAI UPENDRANATH RAYCHAUDHURI, BAHADUR,
		L.M.S.

*The figures in the margin indicate full marks*

### FIRST HALF

1. A body has been brought by the Police with a ligature mark round the neck. How would you ascertain the cause of death, and whether it was suicidal or homicidal ? 195

2. Describe the different kinds of wounds, and state how they are caused. 195

Or,

Two men under the influence of alcohol were seen quarrelling with each other on a pavement. One of them was reported to have dropped down and died. How would you proceed to examine the case with a view to find out the cause of death ? 125

### SECOND HALF

3. What do you understand by the expression that a girl has attained maturity ? Describe the Signs of Virginity and their medico-legal significance. 125

4. Describe the post-mortem appearances in a case of death by Nitric Acid Poisoning. 125

Or,

Describe the signs, symptoms, and treatment in a case of poisoning by Opium. 125

## HYGIENE AND PUBLIC HEALTH

Examiners—	{	DR. R. B. KHAMBATA, D.P.H., M.R.C.P.,
		M.R.C.S.—( <i>Convener</i> ).
		LT.-COL. A. D. STEWART, M.B., CH.B.,
		F.R.C.S.E., D.P.H., D.T.M. & H.,
		I.M.S.
		SIR HASSAN SUHRAWARDY, KT., O.B.E.,
		F.R.C.S.I., M.D., D.P.H.
		MR. TARAKNATH MAJUMDAR, L.M.S., D.P.H.,
		D.T.M., F.C.S.

*The questions are of equal value*

*Only two questions to be answered in EACH half*

### FIRST HALF

1. What is meant by the term 'chlorination of water' ? Under what circumstances is it considered necessary ? Describe briefly the methods of application with particular reference to the regulation of the dose.

2. What is Passive Immunity ? How may it be induced in man ? In what diseases is this type of immunity utilized for treatment or prevention ? Indicate the dosage in one of these diseases.

3. Certain industries give rise to dust and produce disease in man. What are these industries ? Describe the general preventive methods recommended to guard against these diseases.

### SECOND HALF

4. How would you proceed to investigate an outbreak of Typhoid fever with a view to determine the source ? Indicate the particular preventive measures you would advise.

5. Write short notes on the following :—

- (1) Basal metabolism.
- (2) Calorie.
- (3) Energy value of foodstuffs.
- (4) Biological Protein.
- (5) Balanced Diet.

6. Leprosy.—Why in your opinion is Leprosy classed amongst the infectious diseases? Give your ideas as to how Leprosy is carried from man to man. State briefly how Leprosy may be combated in a district in India where it is prevalent.

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# Final M. B. Examination

April, 1933

## MEDICINE

(Including Applied Anatomy and Physiology, Clinical Pathology and Therapeutics.)

Examiners— { RAI BAHADUR DR. UPENDRANATH BRAHMACHARI,  
M.A., PH.D., F.A.S.B. (*Convener*).  
DR. B. C. ROY, B.A., M.D., F.R.C.S. (ENG.),  
M.R.C.P. (LONDON).  
LT.-COL. J. C. DE, M.B., M.R.C.P., I.M.S.  
DR. S. P. BHATTACHARYA, M.D.  
LT.-COL. J. D. SANDES, I.M.S., M.D.,  
F.R.C.P.I.  
DR. A. K. RAYCHAUDHURI, M.D.  
,, U. P. BASU, M.B., F.R.C.P.I.  
MR. PRATULPATI GANGULI.

### FIRST PAPER

#### FIRST HALF

1. Give the etiology, clinical findings, diagnosis, and treatment of melancholia.
2. Describe briefly the pathology of renal oedema, and give its treatment.

#### SECOND HALF

3. Give the etiology, signs, symptoms, diagnosis, and treatment of cerebrospinal meningitis.

Or,

4. Discuss the pathology and localising signs and symptoms of cerebellar tumours.

### SECOND PAPER

#### FIRST HALF

1. Give the etiology, mechanism, symptoms, and diagnosis of Angina Pectoris.
2. Give the etiology, signs, symptoms, and diagnosis of chronic dilatation of the stomach.

## SECOND HALF.

3. Give the ætiology, signs, symptoms, and diagnosis of Leukæmia.

Or,

4. Give the ætiology, pathology, and clinical findings of Hydrothorax.

## SURGERY

(Including Applied Anatomy and Physiology and Clinical Pathology,  
Ophthalmology, Diseases of Ear, Throat, Nose, Radiology,  
Orthopædics and Venereal Diseases)

Examiners—	{	DR. MRIGENDRALAL MITRA, M.D., F.R.C.S. (E.), (Convener).
		MR. LALITMOHAN BANERJEE, M.S., F.R.C.S: (ENG.)
		DR. S. K. MUKHERJEE, D.O. (OXON.), D.O.M.S. (LONDON), F.R.C.S. (E).
		LT.-COL. W. L. HARNETT, I.M.S., F.R.C.S. (ENG.), M.A., M.D.
		MR. SUBODHCHANDRA DUTTA, M.B., F.R.C.S. (E).
		RAI BAHADUR UPENDRANATH RAYCHAUDHURI, L.M.S.

## FIRST PAPER

*The questions are of equal value*

*Either Question 4 or Question 5 must be attempted*

## FIRST HALF

1. What is Brodie's abscess? Give its pathology, clinical features, and differential diagnosis.

2. What do you understand by calculus anuria? Give the symptoms. Describe in detail the methods of investigation which you would employ to arrive at a diagnosis.

## SECOND HALF

3. Give the origin, course, and distribution of the common peroneal nerve. What signs are produced by lesions of this nerve? Under what conditions may they arise?

4. Give the pathology, signs, symptoms, and complications of tuberculous disease of the lower dorsal region of the spine.

Or,

5. What are the causes of chronic enlargement of the inguinal lymphatic glands? Give their differential diagnosis.

## SECOND PAPER

*The questions are of equal value*

*Either Question 4 or Question 5 must be attempted*

1. Mention the various manifestations of ocular syphilis. Describe in detail the clinical features of one such condition.
2. Describe how you would proceed to examine a case of acute appendicitis within the first 48 hours of its onset, and explain the significance of each of your possible findings.
3. Describe the aetiology, morbid anatomy, symptoms, and complications of mucous polypi of the nose.
4. Explain the steps that you would take to prepare a patient for an abdominal section under general anaesthesia, giving your reasons.

*Or,*

5. What considerations would guide you in the choice of an anaesthetic for an operation on a case of acute intestinal obstruction ?

## MIDWIFERY AND DISEASES OF WOMEN

<i>Examiners—</i>	{	DR. KEDARNATH DAS, C.I.E., M.D., F.C.O.G.— (Convenor).
		LT.-COL. V. B. GREEN-ARMYTAGE, M.D. F.R.C.P. (LOND.), I.M.S., F.C.O.G.
		MR. NARENDRANATH BASU, L.M.S.
		„ BAMANDAS MOOKERJEE, L.M.S.
		„ SATINATH BAGCHI, M.Sc., M.B., M.O.
		LT.-COL. P. FLEMING GOW, F.R.C.S. (E)., D.S.O., I.M.S.
		MR. J. M. DAS, L.M.S.

## FIRST PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. Write short notes on :— 60
  - (a) The Pelvic Diaphragm.
  - (b) Tubal abortion.
  - (c) Icterus Neonatorum.
2. Discuss the diagnosis of a pelvic mass of the size of a tennis ball occupying the Pouch of Douglas. 65

## SECOND HALF

3. How would you ascertain the cause of metrorrhagia in a woman aged 40 ? 60
4. How would you treat a case of Incarcerated Retroverted Gravid uterus ? 65

Or,

Describe the various swellings which may be found on the head of a new-born child, and give the differential diagnosis.

## SECOND PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

1. Describe (1) the changes in the uterus during the first stage of labour, and (2) the forces concerned in labour during this stage and their effects. 65
2. Classify the varieties of albuminuria met with during pregnancy. Briefly indicate the prognosis and lines of treatment. 60

### SECOND HALF

3. Discuss the diagnosis of a right occipito-posterior position of the vertex (a) during the last month of pregnancy, (b) at the beginning of the second stage of labour. Describe the treatment to be adopted in each case. 65
4. Discuss the advantages and disadvantages of the different methods of performing Cæsarean section. 60

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November, 1933

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## MEDICINE

### FIRST PAPER

*(Including Applied Anatomy and Physiology, Clinical Pathology and Therapeutics)*

Examiners—{

 RAI BAHADUR DR. UPENDRANATH BRAHMACHARI,  
 M.A., M.D., PH.D., F.A.S.B.—(Convener).  
 DR. B. C. ROY, B.A., M.D., F.R.C.S., M.R.C.P.  
 MAJOR J. C. DE, M.B., M.R.C.P., I.M.S.  
 DR. S. P. BHATTACHARYYA, M.D.  
 LT.-COL. J. D. SANDES, I.M.S., M.D., F.R.C.P.  
 DR. A. K. RAYCHAUDHURI, M.D.

*The questions are of equal value*

### FIRST HALF

1. What is meant by alteration of the heart beat? Give the ætiology, diagnosis, prognosis, and treatment.
2. Discuss the diagnosis and prognosis of Lobar Pneumonia in children. Give its complications.



## SECOND HALF

3. Discuss the differential diagnosis of acute pain in the right upper quadrant of the abdomen.

Or,

4. Discuss the differential diagnosis, signs, and symptoms of a case of ascites.

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

1. Give a classification of Bright's disease. Describe the degenerative forms.

2. Describe the abnormalities of pupils in diseases of the nervous system and in general diseases. Discuss the significance of such abnormalities.

## SECOND HALF

1. What is Filariasis. Describe the clinical findings and pathology of the conditions.

Or,

2. Give the alternative methods of treatment of malaria. Discuss the drug prophylaxis of malaria.

## SURGERY

Examiners—	{	LT.-COL. W. L. HARNETT, I.M.S., M.A., M.D.,
		F.R.C.S.—( <i>Convener</i> ).
		DR. MRIGENDRALAL MITRA, L.M.S., F.R.C.S.,
		M.D. (BRUX.).
		MR. LALITMOHAN BANERJEE, M.S., F.R.C.S.
		DR. S. K. MUKHERJEE, D.O. (OXON.), D.O.M.S.
		(LONDON), F.R.C.S.(E).
		MR. SUBODHCHANDRA DATTA, M.B., F.R.C.S.E.,
		L.M.
		LT.-COL. E. W. O'G. KIRWAN, M.B.,
		F.R.C.S.I., I.M.S.

## FIRST PAPER

(Including Applied Anatomy, Physiology and Clinical Pathology, Ophthalmology, Diseases of Ear, Throat, Nose, Radiology, Orthopaedics and Venereal Diseases).

*The questions are of equal value*

## FIRST HALF

1. Give the aetiology, pathology, and clinical signs of varicose veins of the lower extremity. Mention the complications which may arise. Describe the modern treatment, including that of the complications.

2. What are the sites at which fractures of the clavicle may occur? Describe and explain the causes of the displacement in the common variety. What complications may arise (a) early, (b) late?

### SECOND HALF

*Either Question No. 4 or 5 to be answered*

3. Describe the lymphatic drainage system of the tongue. Give the essential points in the modern treatment of an early case of carcinoma of the tongue (operative details not required).

4. Discuss the pathology of Empyema Thoracis. Give an outline of the treatment at different stages. Explain how the surgical treatment is modified in accordance with the pathology.

*Or,*

5. Describe fully the anatomy of the urogenital diaphragm in the male, and explain the part it plays in a case of rupture of the urethra.

### SECOND PAPER

*The questions are of equal value*

*Either Question No. 4 or 5 to be answered*

1. What circumstances would influence your prognosis in a case of chronic simple glaucoma (a) with, (b) without, operation? Describe the operation you would advise.

2. Describe the aetiology, varieties, clinical features, and treatment of retropharyngeal abscess.

3. Enumerate the extra-abdominal conditions which may simulate an 'acute abdomen.' Describe your method of examination, giving the conclusions you would draw from each step.

4. Describe the various complications that may arise as the result of an infected wound of the scalp. Explain their development from the anatomical relations that obtain in that region.

*Or,*

5. What are the signs and symptoms of chronic prostatitis of gonorrhoeal origin? How would you investigate the case to arrive at a diagnosis? What may be its terminations?

### MIDWIFERY AND DISEASES OF WOMEN

<b>Examiners—</b>	{	SIR KEDARNATH DAS, Kt., C.I.E., M.D.,
		F.C.O.G.—( <i>Convener</i> ).
		MR. NARENDRANATH BASU, L.M.S.
		„ BAMANDAS MUKHERJEE, L.M.S.
		„ SATINATH BAGCHI, M.Sc., M.B., M.O.
		LT.-COL. P. FLEMING GOW, I.M.S., F.R.C.S.,
		D.S.O.
		MR. MANINDRANATH SARKAR, M.B., F.R.C.S.

## FIRST PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. How would you make an ante-natal examination of a primi-gravida in the eighth month of pregnancy. What is the importance of such examination? 65
2. Describe the principles of management of a premature infant. 60

## SECOND HALF

3. Discuss briefly the treatment of pregnancy complicated with Pulmonary Tuberculosis and pregnancy complicated with Heart Disease. 75
4. Describe the etiology and treatment of Acute Salpingitis. 50

## SECOND PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. How would you treat a case of Hyperemesis Gravidarum? 60
2. How would you manage the Second Stage of Labour in an uncomplicated case of Breech Presentation? 65

## SECOND HALF

3. Placenta Prævia.—Describe its varieties, and explain how the bleeding takes place. 60
4. Give the differential diagnosis of a swelling in the abdomen reaching up to the level of the umbilicus. 65

*Or,*

Give the etiology and principles of treatment to be observed in any operation for the cure of a vesicovaginal fistula.

Describe *your* treatment after operation.

# D. P. H. Examination

May, 1933

<i>Examiners—</i>	{	MR. R. B. KHAMBATA, D.P.H., L.R.C.P.
		„ TARAKNATH MAJUMDAR, L.M.S., D.P.H., D.T.M.
		„ C. C. BOSE, M.B.
		SIR H. SUHRAWARDY, KT., M.D., O.B.E., F.R.C.S.I., D.P.H.
		MR. B. B. BRAHMACHARI, L.M.S.
		„ S. N. SUR, M.B., D.P.H., D.T.M.

## Part I

### BACTERIOLOGY AND PARASITOLOGY

*The questions are of equal value*

1. Describe the morphology of the parasite of Kala Azar, and discuss the probable mode of its transmission.
2. Write on the part played by human carriers in the spread of infectious diseases. How would you identify a typhoid carrier?
3. Mention the more important bacteria associated with food poisoning. Describe briefly their morphological and cultural characters and the mode of infection of food by them.
4. Give the life-histories of (i) the parasite of hydatid disease, and (ii) the guinea worm.

### CHEMISTRY AND PHYSICS, ETC.

*All questions carry equal marks*

1. What are sugars? How do saccharose, lactose, levulose, and dextrose differ from one another in their chemical constitution and optical characteristic? Describe the polariscope which you have used, and explain how you will estimate with it saccharose in a sample of commercial sugar.
2. The results of analysis of a sample of a deep tube well water and of the same water after settling in the storage reservoir are as follows :—

	In parts per 100,000.	
	In the tube well water.	In the same water after settling.
Hardness	45.0	32.5
Chlorides as Cl	3.4	3.4
Free and Saline Ammonia as N	0.9	0.85
Albuminoid Ammonia as N	0.01	0.01
Oxygen absorbed	0.073	0.114
Nitrates	Nil.	Nil.
Nitrites	Nil.	trace.
Iron	0.7	Nil.

Nitrates were present on a previous occasion in '02 part as N. Discuss the suitability of the water for drinking and domestic purposes.

3. What is the composition of coal gas? What is poisoning by coal gas due to? How would you detect leakage of the gas into a room?

4. What are the standard values for the constants of cow ghi and buffalo ghi under the Bengal Food Adulteration Act? What are the usual adulterants of ghi, and how do they affect those values? Explain the chemical changes involved in the analysis for the Reichert-Wollny and Polenské values. What are these values due to? What constituents of the milk fat remain behind in the distilling flask?

## Part II

### HYGIENE AND SANITATION, INCLUDING SANITARY ENGINEERING

*The questions are of equal value*

*All THREE questions are to be answered*

1. Mention the different methods for disinfection of (a) infected room, (b) clothes and bedding.

Discuss the value of steam as a disinfectant, and describe one method which you think is the best.

2. What are the different factors concerned in the transmission of plague, and what relation has temperature and humidity on such transmission?

What steps will you take to prevent an epidemic of plague?

3. Compare the advantages of trenching and water carriage system of disposal of night soil. What factors will influence your choice of installing one or the other method?

### EPIDEMIOLOGY AND INFECTIOUS DISEASES

*The questions are of equal value*

1. A child suffering from Diphtheria is found to be occupying with other members of the family a small cottage in which he cannot be properly isolated from others. The child is attending a school and the father is a dairyman. What measures should be taken to prevent the spread of disease?

2. What steps should be taken by you as Health Officer to reduce the mortality from Tuberculosis in a town in Bengal with a population of 100,000 persons, the funds at your disposal for the purpose being Rs. 50,000?

3. Enumerate the points to which you would direct your enquiry into an outbreak of Enteric fever in a town.

4. State the ranges in duration of periods of (a) incubation, (b) fever, (c) infectivity in each of the following diseases; and show how the knowledge may be applied for the prevention of these diseases, namely: Cholera, Plague, Yellow fever, Typhus, Typhoid fever, Smallpox, Measles, and Diphtheria.

## SANITARY LAW, VITAL STATISTICS, AND PUBLIC HEALTH ADMINISTRATION

*The questions are of equal value*

1. Do you know of any existing legal powers which can be used for dealing with malaria (a) in a big city like Calcutta, and (b) in rural areas of Bengal? Are they sufficient to enable adequate measures to be taken against the disease? If not, what further enactments would you recommend?

2. What is the importance of registering the death-rates at different ages and for different sexes?

What is the importance of studying carefully the seasonal mortality rate?

Illustrate your answers and discuss fully the importance.

3. Describe any scheme you know of Rural Public Health Organization existing in any of the provinces of India.

State the necessary requirements of an ideal scheme of Public Health Administration in the rural areas of Bengal.

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November, 1933

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Examiners—	{	MR. R. B. KHAMBATA, D.P.H., L.R.C.P.
		„ C. C. BOSE, M.R.
		„ B. B. BRAHMACHARI, L.M.S.
		„ S. N. SUR, M.B., D.P.H., D.T.M.
		„ TARAKNATH MAJUMDAR, L.M.S., D.P.H., D.T.M.

## HYGIENE AND SANITATION INCLUDING SANITARY ENGINEERING

*The questions are of equal value*

1. You have been asked to report on the plumbing arrangements of a newly constructed house. Mention the points you will note from the public health point of view stating your reasons. Describe the water carriage system of removal of excreta in a dwelling house, with the help of a diagram, from the entrance of the Unfiltered Water to the exit of the sewage out of the house.

2. Enumerate the parasitic diseases which may be carried through food. Describe, in detail, one of such diseases caused by an animal parasite with its life history.

3. What diseases may appear in persons employed in a printing press, a paints workshop, and a tannery? Describe the symptoms by which they can be detected. What precautionary measures will you recommend to be adopted by the employer and the employee?

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**EPIDEMIOLOGY AND INFECTIOUS DISEASES**

*The questions are of equal value*

1. State what you know about the mode of origin, cause of spread, and prevention of Cerebrospinal Fever.
  2. There is an epidemic of Diphtheria in a Boarding School in a sewered town in Bengal. Describe the steps you would take as Health Officer to check the epidemic.
  3. What steps would you recommend as Medical Officer of Health of a town in Bengal with a population of 200,000, for the prevention of venereal diseases, the funds at your disposal being Rs. 25,000?
  4. Enumerate the points to which you would direct your enquiry into an outbreak of Typhoid Fever in a small town of which you are the Health Officer. What steps should be taken by you to prevent the spread of the epidemic?
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**SANITARY LAW, VITAL STATISTICS, AND PUBLIC HEALTH ADMINISTRATION**

*The questions are of equal value*

1. What are the legal enactments existing in Bengal, which may be made use of for the prevention or suppression of (a) malaria, (b) cholera, and (c) smallpox? If you consider that these enactments do not give sufficient legal powers to Local Bodies, what rules would you advise to be framed for the prevention and suppression of these three diseases?
  2. (a) What is meant by the term 'comparative mortality figure'? How is it obtained, and what is its value?
  - (b) Explain the difference between the crude death-rate, recorded death-rate, and corrected death-rate.
  3. You are asked to write out a full and detailed report on 'Ganga Sagar Mela,' describing your duties first as Port Health Officer, Calcutta, and secondly as a District Health Officer in charge of the Mela grounds at Sagar Island.
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# I. E. Examination

1933

## MATHEMATICS

(COMPUTATION, MENSURATION, AND STATICS)

Examiner—MR. J. M. BOSE, M.A., B.SC. (EDIN.)

*The questions are of equal value*

*Not more than THREE questions are to be attempted from EACH half*

### FIRST HALF

1. The depth of a canal at various distances from one bank are found with a plumb line and the result tabulated as follows :—

Distance from the bank in feet		0	10	20	30	40	45
Depth in feet	...	10	15	17	18	20	5

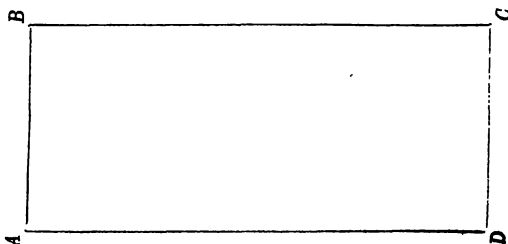
Find how much water flows across the section in 24 hours if the average velocity of flow be 3 miles an hour.

2. Prove that in levelling a triangular plot of land of area  $S$ , if the three corners are lowered by amounts  $p$ ,  $q$ ,  $r$ , then the volume of the earth to be removed is

$$\frac{1}{3} S(p+q+r).$$

The figure below represents the plan of a rectangular plot of land on a scale of 1 cm. to 10 feet.  $A$  is the lowest point,  $B$  is 1 foot above  $A$ ,  $C$  is two feet above  $B$ , and  $D$  is one foot below  $C$ .

Determine the volume of the earth to be removed to reduce the plot to the level of  $A$ .



3. (a) Estimate the value of

$$\frac{\sqrt{38456} \times 8}{60054 \times 00912}$$



- (b) Find the value of  $c$  from the equations—

$$\begin{aligned} 3 \sin \theta + 1.5 \cos \theta &= .84 \\ 2 \sin \theta - \cos \theta &= c. \end{aligned}$$

4. (a) The area of a triangle  $ABC$  is found from measurements  $a=85$  feet,  $b=120$  feet,  $C=64^\circ 30'$ . Another set of measurements give  $a=85.5$  feet,  $b=119$  feet,  $C=64^\circ 40'$ . Find the ratio which the difference in the areas thus found bears to the original determination.

(b) Two walls of a house meet at right angles and the roofs above these walls are at an inclination of  $40^\circ$  to the horizon. Find the inclination to the horizon of their line of intersection.

5. The following quantities are believed to follow a law  $pv^n = \text{const.}$  Verify if this is so, and find the most probable value of  $n$ .

$v$	1	2	3	4	5
$p$	205	114	80	63	52

## SECOND HALF

1. Find the condition of equilibrium of a set of coplanar forces meeting at a point. How would you represent geometrically three forces keeping a body in equilibrium?

Two ropes inclined at  $60^\circ$  and  $45^\circ$  to the vertical support a weight of 300 lbs. Find by graphical construction or otherwise the tension in each rope.

2. For a system of coplanar forces in equilibrium show that the algebraic sum of the moments of all the forces about any point in the plane vanishes.

A uniform beam of length 24 feet and weighing  $1\frac{1}{2}$  tons rests on two supports 14 feet apart. One end of the beam is 3 feet from one support from which there is a uniformly distributed load of 70 lbs. per foot up to the middle point of the beam. Find the pressures on the supports. What weight at the end close to the second support will be able to tilt the beam?

3. Deduce the analytical formulæ for finding the centre of gravity of a set of point masses in a plane.

A structure is of the form of a solid cone with its base coincident with the upper end of a vertical solid circular cylinder. The diameter of the cylinder is 2 metres and its height is 12.5 metres. The slant side of the cone (generator) is 3 metres in length. If the material of the cylinder be  $2\frac{1}{2}$  times heavier than that of the cone, find the centre of gravity of the structure.

4. Explain what is meant by Work done by a Force and Power.

Find the horse-power of an engine which can pump all the water in a well with circular cross-section 10 feet in diameter and completely filled with water up to a depth of 50 feet in half an hour to a rectangular cistern whose base is 500 square feet and is at a height of 100 feet above the surface of the well. Take the weight of 1 cubic foot of water to be 62.5 lbs.

5. Define Co-efficient of Friction and Cone of Friction.

You are required to draw a body weighing 500 lbs. up a rough incline of one in ten along a line of greatest slope. If the co-efficient of friction be 0.3 what is the minimum force you will have to use?

## MATHEMATICS

(DIFFERENTIAL CALCULUS AND PLANE GEOMETRY)

*Examiner*—PROF. N. R. SEN, M.A., PH.D., D.Sc.*The questions are of equal value**Not more than FOUR questions are to be attempted from EACH half*

## FIRST HALF

1. Explain how the differential co-efficient of a function measures its rate of change. If the function is represented by a graph what does its differential co-efficient represent?

Find the rate at which the volume of a sphere changes with the area of its surface.

2. Differentiate the following :—

$$\frac{\sin^{-1}x}{\sqrt{1-x^2}}, \log \sin e^x.$$

Find the  $n$ th differential coefficient of  $e^{ax} \sin bx$ .

The rate per unit increase in volume at which a pound of gas is receiving heat during its expansion is

$$\frac{dH}{dv} = \frac{1}{\gamma-1} \left\{ v \frac{dp}{dv} + \gamma p \right\};$$

if  $p v^n = c$ , find  $\frac{dH}{dv}$  in terms of  $p$ .  $\gamma$ ,  $n$ , and  $c$  are constants. For what

value of  $n$  is  $\frac{dH}{dv} = 0$ ?

3. Explain what is meant by integration as a process of summation. Illustrate by integrating

$$\int_0^1 e^x dx.$$

Integrate

$$\int \frac{\sin^{-1}x}{\sqrt{1-x^2}} dx, \quad \int \frac{dx}{(x-1)\sqrt{x-2}}, \quad \int x^n \log x dx.$$

4. A tank with open top and square section is to hold 100 cu. ft. Find the cost of lining it with lead at 6 as. per square foot when the cost is a minimum.

5. Find by integration the whole area of an ellipse and also the area included between a parabola and its latus rectum.

## SECOND HALF

1. Find the area of the triangle whose vertices are  $(x_1, y_1)$ ,  $(x_2, y_2)$ , and  $(x_3, y_3)$ . If the point  $(xy)$  lies on the straight line passing through  $(1, 1)$  and  $(0, 2)$  show that

$$x+y=2.$$

2. Find the length of the perpendicular drawn from the point  $(x_1, y_1)$  on the line

$$ax+by+c=0.$$

Find the locus of a point  $P$  which moves such that the sum of the perpendiculars drawn from  $P$  on two given intersecting straight lines is constant.

3. Find the condition that the equation

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$$

should represent a pair of straight lines.

Show that the condition that the pairs of straight lines

$$ax^2 + 2hxy + by^2 = 0$$

$$a'x^2 + 2h'xy + b'y^2 = 0$$

should have one common line is

$$4(ah' - a'h)(b'h - h'b) = (ab' - a'b)^2.$$

4. Find the equation to the tangent to the circle

$$x^2 + y^2 + 2gx + 2fy + c = 0$$

at the point  $(x_1, y_1)$  on the circumference.

Show that the line  $x + y = 2$  touches the circles

$$x^2 + y^2 = 2 \text{ and } x^2 + y^2 + 3x + 3y - 8 = 0$$

at the same point.

5. Find the circle through the origin and the points  $(2, 3)$  and  $(3, 4)$ . Find the condition that the intercept made on

$$x \cos \alpha + y \sin \alpha - p = 0$$

by the circle

$$x^2 + y^2 + 2gx + 2fy + c = 0$$

may subtend a right angle at the origin.

6. Find the equation to a circle in polar co-ordinates, the origin being a point on the circumference.

Through the intersection of two given circles a straight line is drawn. Find the locus of the middle point of the portion intercepted between the two circles.

## GENERAL CHEMISTRY

Examiners— $\left\{ \begin{array}{l} \text{MR. N. N. SEN, M.Sc. (CAL.), A.I.C.,} \\ \text{A.R.S.M. (LOND.).} \\ \text{DR. M. QUDRAT-I-KHUDA, D.Sc.} \end{array} \right.$

### THEORETICAL PAPER

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

#### FIRST HALF

1. Define fractional distillation, steam distillation, vacuum distillation, and destructive distillation.

Show with the aid of a flow sheet the main products and by-products that are obtained by the destructive distillation of bituminous coal.

2. Outline the occurrence, metallurgy, properties, and uses of tin. Why does a tinned article of iron corrode more quickly than a galvanized article of iron when the surface is damaged?

3. Describe the preparation, properties, and uses of the following :—

- (1) Ferro-silicon; (2) Ferro-manganese; (3) Ferro-chrome; (4) Lead chromate; (5) Zinc-white; (6) Lithopone.

## 4. State Faraday's laws of electrolysis.

An electric current is passed through two cells with platinum electrodes, one containing silver sulphate and the other sulphuric acid. Calculate the time necessary to deposit 0.6708 gm. of silver at the cathode by passing a current of one ampere through the cells connected in series. What volume of hydrogen measured at 30°C. and 756 mm. pressure would be released in the second cell during the same time? [One gram atomic weight of a monovalent element is deposited by passing 96,500 coulombs of electricity.]

## SECOND HALF

## 5. How can you utilize the nitrogen of the atmosphere for the production of useful chemicals? Describe any one method by which this is done on a large scale.

By what other methods have these products been obtained industrially, and how?

## 6. Discuss the changes that take place when—

- (a) Chlorine is passed through potassium ferrocyanide;
- (b) Calcium fluoride comes in contact with sand and sulphuric acid;
- (c) Potassium chloride is acted upon by an electric current in solution or otherwise;
- (d) Lead is subjected to the action of acetic acid, tan-bark, moisture, and air.

What are the products obtained, and under what conditions? Indicate their uses if any.

## 7. What are the common minerals that constitute the sources for the preparation of copper? Describe a method for the commercial production of this metal in a pure condition. Explain the chemical reaction involved in the process.

What are the different alloys of this metal known? Describe the preparation of some of these characteristic alloys.

## 8. Write short notes on the following, illustrating your answer with examples in each case :—

- (a) Autoxidation, (b) Electroplating, (c) Osmotic pressure, (d) Dialysis, (e) Exothermic reaction.

## PHYSICS

Examiners—{ MR. A. C. CHAKRABARTI, M.Sc., M.A. (CANTAB.).  
 „ P. C. MAHALANOBIS, M.A. (CANTAB.).

*The questions are of equal value*

*Not more than THREE questions are to be attempted from EACH half*

## FIRST HALF

## 1. Define the unit of heat and the unit of work. How can you accurately measure the ratio between them?

Discuss the specific heat of water.

## 2. What is Newton's law of cooling? Discuss the various factors that determine the rate of cooling of a hot body.

Explain 'the method of cooling' for finding the specific heat of a liquid.

3. Describe Regnault's method of finding the specific heat of a gas at constant pressure.

How does the ratio  $\frac{C_p}{C_v}$  vary with different gases?

4. An equi-convex lens has a focal length of  $-25$  cms. in air; it is fixed horizontally so that its lower surface is in contact with water in a tank one metre in depth. At what height from the lens should a lamp be placed so that its light may be concentrated at a point on the bottom of the tank.

[ $\mu$  for glass =  $1.5$ ;  $\mu$  for water =  $1.33$ ]

## SECOND HALF

5. Why is it undesirable to use a single convex lens as the eyepiece of an optical instrument? Discuss how the defects have been reduced in any type of eyepiece that is in common use.

6. Define the magnetic elements at a place. Briefly describe how they can be measured.

7. Define Co efficient of Self-Induction, and explain carefully the units in which it is measured.

When a current is started or stopped in a coil, how does its Self-Induction affect the growth and decay of the current?

8. Current is supplied by a dynamo to a house at a distance, the resistance of the lines being  $2$  ohms. The dynamo maintains a steady potential difference between its terminals. When  $20$  lamps are switched on the current is  $10$  amps., but when  $10$  lamps are on the current is  $5.5$  amps. Calculate the power developed by the dynamo in the two cases. (Each lamp has the same resistance.)

## MATHEMATICS

### (CALCULUS AND PLANE GEOMETRY)

Examiners— { MR. J. M. BOSE, M.A., B.Sc. (EDIN.).  
 ,, KHAGENDRANATH CHAKRABARTI, M.Sc.

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

### FIRST HALF

1. Obtain from first principles the differential co-efficients of  $\cot x$  and  $\log ax$  where  $a$  is a constant.

Differentiate  $x^x$ .

Find  $\frac{dy}{dx}$  in the following cases :—

(1)  $y = x^{y^x}$ .

(2)  $y = x \log \frac{y}{a+bx}$ .

2. Find the general term in the expansion of  $e^{ax} \cos bx$ .

Find the first three terms in the expansion of  $\log(1+\tan x)$ .

3. If  $p$  be the perpendicular from the pole on the tangent to a curve prove that

$$\frac{1}{p^2} = \left( \frac{du}{d\theta} \right)^2 + u^2$$

where  $u = \frac{1}{r}$ . Find an expression for  $p$  in the case of a circle where the pole is on the circumference.

4. Integrate the following :—

$$\int \frac{dx}{x + \sqrt{x-1}}, \quad \int \frac{dx}{(x-1)^2(x-2)}, \quad \int_0^{\frac{\pi}{2}} \sin^2 x \cos^4 x \, dx.$$

Prove that

$$\int_0^1 x^n(1-x)^n dx = \int_0^1 x^n(1-x)^n dx.$$

5. A semicircular area of radius  $a$  is just immersed in a fluid, its diameter being horizontal in the surface. If the density of the fluid varies as the depth, show that the centre of pressure will be in the vertical radius of the semicircle at a distance from the centre equal to

$$\frac{32a}{15\pi}.$$

6. Find by integration the centre of gravity of a parabolic area bounded by its latus rectum.

## SECOND HALF

1. If

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$$

represents a conic and  $lx + my = n$  a straight line, interpret the equation

$$(ax^2 + 2hxy + by^2)n^2 + 2(gx + fy)(lx + my)n + c(lx + my)^2 = 0.$$

Find the value of  $\lambda$  for which the three straight lines

$$x + 3y - 5 = 0, \quad \lambda x - y + 7 = 0, \quad \text{and} \quad 2x - 5y + 1 = 0$$

become concurrent.

2. Find the condition that the straight line  $y = mx + c$  may touch the circle  $x^2 + y^2 = a^2$ . Find the co-ordinates of the point of contact.

Deduce that the locus of the point of intersection of perpendicular tangents is another circle of double the area.

3. Find the equation of the radical axis of two circles, the equations of which are given, and shew that the radical axis is perpendicular to the line of centres of the circles.

Shew that the length of the common chord of the circles

$$(x-h)^2 + (y-k)^2 = r^2 \quad \text{and} \quad (x-k)^2 + (y-h)^2 = r^2 \quad \text{is} \quad \sqrt{4r^2 - 2(h-k)^2}.$$

4. Shew that the equation of the parabola whose focus is the point  $(-1, 3)$  and whose vertex is the point  $(4, 3)$ , is

$$y^2 + 20x - 6y - 71 = 0.$$

Find the equation of the tangent to the parabola  $y^2 = 6x$  which is parallel to  $4y - 3x + 7 = 0$ .

5. Define Conjugate Diameters of an ellipse.

Prove that the eccentric angles of the extremities of two conjugate diameters of an ellipse differ by a right angle.

Hence deduce that the sum of the squares of a pair of conjugate semi-diameters of an ellipse is constant.

6. Find the equation of the tangent at any point of the hyperbola

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1,$$

in the form

$$\frac{x}{a} - \frac{y}{b} \sin \theta = \cos \theta.$$

Obtain the equation of the pair of asymptotes of the above hyperbola.

## MATHEMATICS

(HYDROSTATICS, DYNAMICS, AND APPLIED MECHANICS)

Examiners— { MR. T. A. GARLAND, B.Sc., A.M.I.C.E.  
DR. N. N. SEN, D.Sc.

*The questions are of equal value*

### FIRST HALF

*Only THREE questions are to be attempted*

1. Find the pressure of a heavy homogeneous liquid at any point in it.

The width of a vertical dock-gate is 50 ft., and on one side there is salt water of specific gravity 1.026 to a depth of 25 ft. On the other side there is fresh water. Find its depth if the thrusts on the two sides of the gate are equal.

2. Prove that the resultant vertical thrust on any surface immersed in any heavy liquid is equal to the weight of the superincumbent liquid and acts through the c.g. of this superincumbent liquid.

A double funnel, formed of two equal cones with a common axis communicating at their common vertex, is placed on a horizontal plane with the axis vertical and is filled with water; prove that the resultant vertical thrust on the curved surface of the lower cone is  $2\frac{1}{2}$  times the weight of the water.

3. Find the conditions of equilibrium of a heavy body floating freely in a liquid.

A solid displaces  $\frac{1}{a}$ ,  $\frac{1}{b}$ ,  $\frac{1}{c}$  of its volume respectively when it floats in

three different liquids; find what fraction of its volume it displaces when it floats in a mixture formed of equal weights of the liquids.

4. *Either,*

A body moves with a uniformly accelerated motion; find the distance traversed by it in the  $n$ th second of its motion.

If the body starts from rest, shew that the distance covered in the  $(p-p+1)$ th second is equal to the sum of the distances traversed in the first  $(p-1)$  seconds and in the first  $p$  seconds.

Or,

Enunciate Newton's Laws of Motion.

A force of 60 dynes acts for nine seconds upon a mass of 40 grammes initially at rest. Find the distances covered in the 9th and the 12th second of the motion respectively.

4.

Either,

Define Work, Energy, Horse-Power.

Calculate the H.P. of the engine of a train whose weight is 1,000 mds. and which is moving up an inclined plane with a uniform speed of 60 miles per hour; the inclination of the plane being 1 in 100 and the resistance due to friction, etc., being  $\frac{1}{20}$  of the weight of the train. [1 maund = 82½ lbs.]

Or,

State the Principle of Conservation of Energy.

A particle is projected from the ground with a velocity  $V$  making an angle  $\alpha$  with the horizontal plane. Prove that at any instant the sum of its kinetic and potential energies is constant.

## SECOND HALF

THREE questions are to be attempted

1. Calculate the moment of inertia of a beam of I section (20 inches deep and 8 inches wide; flanges 1 inch thick and web  $\frac{3}{8}$  inch thick) about an axis  $xx$  through the centroid parallel to the flanges.

What is the distance of the centre of gravity of the upper half of the section from the axis  $xx$ ?

2. Draw curves showing how the shearing stress varies across the sections of (a) rectangular, and (b) I beams.

A beam of the same section as that given in Question 1 is supported on a span of 8 feet and loaded with 80 tons at the centre. Determine the greatest vertical shearing stress in the beam.

[Neglect the weight of the beam itself.]

3. Find the deflection at any point on a simply supported beam of span  $L$  due to a central load  $W$ .

A timber beam of uniform cross-section, 6 inches wide and 12 inches deep, is carried by two supports 12 feet apart. If the deflection at the centre is not to exceed 0.6 inches, what is the maximum concentrated load that can be placed there?

$E = 8 \times 10^6$  lbs. per square inch.

[The weight of the beam may be neglected.]

4. Four forces have the magnitudes, positions, and directions as shown in the figure given on the next page. Find, by the link and polygon method, the magnitude, position and direction of the resultant.

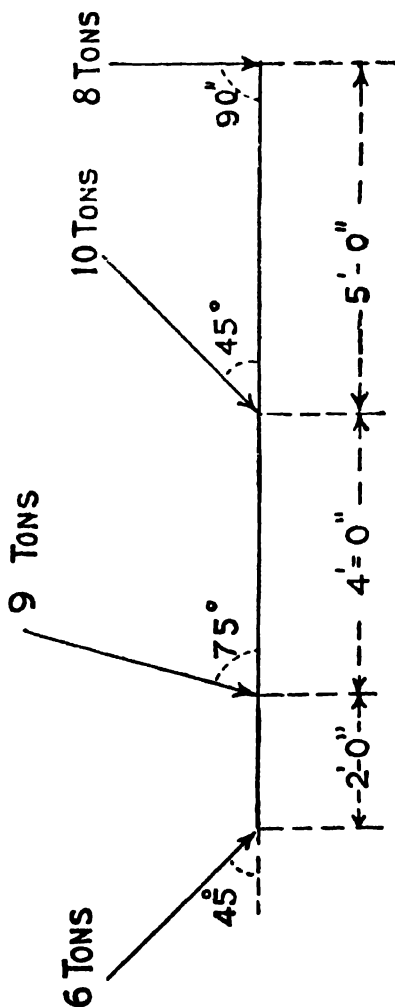
Force scale	...	...	5 tons to 1 inch.
Linear scale	...	...	2 feet to 1 inch.

5. A square concrete foundation 15 ft.  $\times$  15 ft. carries a load including its own weight of  $8\frac{1}{2}$  tons per square foot at the base.



The earth weighs 120 lbs. per cubic foot and angle of repose is  $35^\circ$ . At what depth below the surface must the base of the foundation be placed?

6. At a point in the cross-section of a beam the tensile stress normal to the cross-section is 5 tons per square inch, and the shearing stress on the section is 4 tons per square inch. What are the inclinations of the principal planes to the cross-section and the values of the principal stresses?



## APPLIED PHYSICS

Examiners— { MR. A. C. CHAKRABARTI, M.Sc., M.A., (CANTAB.).  
 PROF. P. N. GHOSH, M.A., Ph.D., Sc.D.,  
 F.INST.P.

*The questions are of equal value*

## FIRST HALF

1. Briefly describe Lees and Chorlton's method of comparing the conductivities of bad conductors.

Find the time required to form a thickness of 2 cms. of ice on a pond when the air in contact with its upper surface is maintained at  $-12^{\circ}\text{C}$ . Latent heat of fusion of ice = 80; its conductivity = .0022, and its density = .917.

2. Establish Boyle's Law and Avogadro's Law on the elementary kinetic theory of gases.

3. Establish the equation  $pv^{\gamma} = \text{const.}$  for the adiabatic expansion of a perfect gas.

A mixture of air and petrol vapour ( $\gamma = 1.3$ ) at a temperature of  $30^{\circ}\text{C}$ . is quickly compressed to one-fifth of its original volume. What will be the final temperature?

4. Calculate the latent heat of steam at  $100^{\circ}\text{C}$ ., given that an increase of pressure of .00364 megadyne per sq. cm. raises the boiling point from  $100^{\circ}\text{C}$ . to  $100.1^{\circ}\text{C}$ ., that the volume of 1 gm. of steam at  $100^{\circ}\text{C}$ . is 1645.55 c.c. and that the volume of 1 gm. of water at  $100^{\circ}\text{C}$ . is 104 c.c.

## SECOND HALF

5. What is the Peltier effect? What is the Thomson effect? Explain fully the thermodynamical reasoning that led Kelvin to discover the Thomson effect.

6. Obtain an expression for the magnetic field produced by a solenoid at different points on its axis.

7. Obtain an expression for the capacity per unit length of a cylindrical condenser.

Find the capacity per kilometre of a cable filled with gutta-percha composition of S.I.C. = 2.5. The outer diameter of the cable is 5 cms. and that of the core 2 cms.

8. Define the unit of resistance. How is the unit to be obtained practically?

Explain any one method of absolute determination of the Ohm.

## MECHANICAL ENGINEERING

Examiners— { MR. J. RIFFKIN, B.Sc. (GLASGOW), DIP.R.T.C.,  
 A.M.I.MECH.E., F.R.ECONS.  
 ,, ABDUL MOHSIN AHMED, B.Sc. (BRISTOL).  
 ,, B. N. BANERJEE.

*Attempt THREE questions only from EACH half*

### FIRST HALF

*The questions are of equal value*

1. Describe, with the aid of line sketches of the engine and illustrations of the PV diagrams, the cycle of operations in each of the following: (a) a four-stroke gas engine, (b) a two-stroke oil engine, (c) a Diesel engine using blast air for fuel injection.

2. During a test on a four-stroke Diesel engine the following figures were obtained: duration of test, 40 minutes; M.E.P., 94 lb./in.<sup>2</sup>; net brake load, 170 lb.; jacket water, 740 lb.; oil consumed, 9.9 lb.; revolutions, 8,140; temperature rise of jacket water, 41°C.; cylinder diameter, 12 ins.; stroke, 18.25 ins.; effective diameter of brake wheel, 9 ft.; calorific value of the fuel, 10,800 C.H.U./lb.

Calculate the I.H.P. and B.H.P. developed, and draw up a heat balance for the test.

3. With reference to a simple slide valve for a steam engine, define steam lap, exhaust lap, lead, angle of advance, and eccentricity.

A slide valve has a travel of 4 ins. and an angle of advance of 45°. The lead on the cover end is 0.2 in. Find for that end (a) the steam lap, (b) the crank positions at admission and cut-off, and (c) the maximum opening to steam. If the exhaust lap is 0.5 in., find the crank positions at release and compression.

4. A turbo-generator set works at a consumption rate of 12.4 lb. of steam per K.W. hour. The boiler receives feed water at 72°C. and generates steam at 215 lb./in.<sup>2</sup> abs. ( $t=197.76^{\circ}\text{C.}$ ,  $L=469.32$  C.H.U.) with 85°C. superheat. The coal used in the boiler has a calorific value of 7,300 C.H.U./lb. and costs Rs. 11 per ton. If the boiler efficiency is 75 per cent., determine the overall thermal efficiency of the plant and the fuel cost per K.W. hour. Take the specific heat of superheated steam as 0.57. 1 K.W.=1.34 H.P.

5. During a boiler trial the steam produced at 180 lb./in.<sup>2</sup> abs. ( $t=373^{\circ}\text{F.}$ ) was 3 per cent. wet. The feed temperature was 100°F., and the water evaporated per hour was 7,500 lb. The weight of coal burned was 950 lb./hour of calorific value 14,000 B.Th.U./lb. Calculate the thermal efficiency of the boiler and the equivalent evaporation from and at 212°F. per lb. of coal.

### SECOND HALF

*The figures in the margin indicate full marks.*

1. Show with neat sketches the process of drawing the contour of a Simple Harmonic Rotating Cam with the following particulars:— 50

The follower is a roller of 1 inch diameter. Its path is rectilinear and passes through the axis of the cam when produced. The distance between the centres of the cam and the roller is 2 inches in the no-lift position. The total lift of the roller is  $\frac{3}{4}$  inch. The roller rises during  $\frac{1}{2}$  of the period, then dwells for  $\frac{1}{4}$  of the period, and falls during  $\frac{1}{4}$  of the period.

2. A lathe has a pinion of 32 teeth fixed to the head stock-spindle. The screw has 8 Right Hand Threads per inch and a pinion of 32 teeth fixed to it. It is required to cut 12 T.P.I. (Whitworth Right Hand) on a  $\frac{3}{8}$ -inch rod. Find the ratio of the compound wheel and suggest the number of teeth on each wheel. With a neat sketch show the arrangement of the wheels instituting an idling wheel. 50

Sketch the tip of the cutting tool with dimensions.

3. Describe with a neat sketch the mechanism on any type of Indicator for obtaining a straight line motion of the pencil point. 50

In an Indicator the spring has a strength of 50 lb. per inch compression. The diameter of the piston is  $\frac{1}{2}$  inch. If the ratio of the pencil movement to that of the piston be five, find the pressure scale of the diagram.

4. A shaft is transmitting 30 H.P. at 150 R.P.M. There is a flange coupling in the line with 4 bolts connecting the flanges. Find the diameter of the bolts if the diameter of the bolt circle is 3 inches and the safe shear stress be 6 tons per sq. inch. 50

5. A shaft running at 200 R.P.M. carries a pulley 12 inches diameter, which drives a reciprocating pump at 50 strokes per minute by means of a belt  $\frac{3}{4}$  inch thick. Allowing for the thickness of the belt determine the diameter of the pump pulley. 50

If the power required to drive the pump be 5 H.P., determine the width of the belt allowing a stress of 200 lb. per inch width. Assume the tension of the belt on the tight side to be twice that on the slack side.

## ELECTRICAL ENGINEERING

Examiners— $\left\{ \begin{array}{l} \text{Mr. A. K. DAS, B.Sc.} \\ \text{,, J. D. CHAUDHURI, B.Sc. (MANCHESTER).} \\ \text{,, A. B. CULLEN, O.B.E., M.C.} \end{array} \right.$

*The questions are of equal value*

### FIRST HALF

*Not more than THREE questions to be answered*

1. (a) Represent the following E.M.F.'s by vectors :—

$$5 \sin wt; 3 \cos wt; 2 \sin \left( wt - \frac{2\pi}{3} \right).$$

(b) Find the magnitude of the resultant vector by the symbolic method.

(c) Represent the resultant vector in a vector diagram (a).

2. (a) A wooden core of 25 cm. mean diameter and 10 cm.<sup>2</sup> cross-section is wound with 1,200 turns of fine wire. Calculate the inductance of the winding.

(b) Calculate the value of the induced E.M.F., when a current varying at the rate of 200 amperes per second is sent through the winding.

3. An inductive circuit has a resistance of 12 ohms and an inductance of 0.2 henry. What current will be taken when the circuit is connected across the terminals of an alternator whose specification is as follows?—

No. of Poles=10.

Single phase.

Terminal voltage=2,000 volts.

R.P.M.=600.

4. A choke coil of negligible resistance connected across a 500 volt 50 cycles circuit takes 1 amp. at 0.8 power factor. What capacity must be placed in parallel with it in order to make the power factor of the combination equal to unity?

5. (a) A D.C. 220 volt 80 watt fan is sparking badly at the brushes. What are the probable faults?

(b) How would you carry out a complete test on a faulty fan armature?

## SECOND HALF

*Only FOUR questions to be answered*

1. The field current of a motor at 20°C. was observed to be 2.5 amps., and after a six hours run it had fallen to 2.08 amps. If the P.D. across the field coils was 230 volts, what was the final temperature of the coils?

( $\alpha = 0.00428$ .)

2. A lamp giving 100 candle-power in all directions is fixed 15 feet above the surface of the ground. Find the intensity of illumination at a point 8 ft. 6 ins. away from the point on the ground immediately below the centre of the lamp.

3. Calculate the cross-sectional area of copper feeders for a 110 volts 5 B.H.P. motor (2 wire D.C.) having an efficiency of 75 per cent. situated 200 feet from the source of supply; the loss in the feeders must not exceed 3 per cent. of the motor output.

( $s = 0.7 \times 10^{-6}$  ohm per inch cube.)

4. An electric motor (2 wire D.C.) takes 20 amps. at 200 volts when driving a pump which raises 120 gallons of water per minute to a height of 50 feet. Find the overall efficiency of the set.

(One gallon of water weighs 10 lbs.)

5. A 40 watts 100 volts lamp is connected in series with a 40 watts 120 volts lamp across 220 volts mains. Find—

(1) The current taken by each lamp;

(2) The P.D. across the 100 volts lamp;

(3) The P.D. across the 120 volts lamp.

6. (a) Explain the difference between the E.M.F. of a dynamo and the P.D. at the terminals of the dynamo.

(b) What do you understand by—

(1) The efficiency of a dynamo;

(2) The efficiency of an electric lamp?

## MATERIALS OF CONSTRUCTION

Examiners—{ MR. R. R. GHOSH, B.A., B.E.  
,, M. N. MUKHERJEE, B.E.

*The questions are of equal value*

*Only FOUR questions to be attempted from EACH half. The candidates shall give their answers in their own words as far as practicable*

## FIRST HALF

1. What is galvanised iron? Why is it galvanised? When the effects of galvanising wears off, what is the best way to treat it?

2. Name the various articles that are made of wrought iron, cast iron, and steel in a building.

3. In passing 2 inches thick teak planking, name the defects you would specially look for, and how would you detect any such?

4. What kinds of stones are available in Bengal and Bihar, and what uses are made of each?

5. What tests would you specify for bolt and rivet steel? Why is an upper limit of tensile strength generally specified?

6. Write short notes on the characteristics and uses of the following timbers : Sal, Teak, Mango, Toon, Jarool.

### SECOND HALF

1. What is Reinforced Concrete? What are the important properties of Reinforced Concrete which have popularised its use in building work? Name some of the uses to which Reinforced Concrete has been put.

2. Mention the important points you note in inspecting a delivery of bricks for a building to be constructed of first class materials; also give specification of first class brickwork.

3. Briefly enumerate the materials commonly used in the construction of a building under different heads.

4. (i) What are the characteristics of good timber? What objects are attained by seasoning timber?

(ii) What is meant by the 'base' of a paint? State the different bases used in paints.

5. What limes are used for—

- (1) foundation,
- (2) superstructure,
- (3) roof

of a building? If they are different, give reasons for your selection.

Give the number of bricks and the quantity of dry mortar required for 100 c.ft. of brickwork.

Give the quantity of cement, sand, and aggregate measured dry for 100 cubic feet of cement concrete mixed in the proportion of 1 : 2 : 4.

### DETAILS OF CONSTRUCTION

*Examiners—* { MR. PULINBIHARI GHOSH, B.Sc., B.E., A.M.I.E.  
RAI BAHADUR CHUNILAL SARKAR, B.E.

*The questions are of equal value*

*Four questions only to be attempted from EACH half*

### FIRST HALF

1. Explain with the help of neat sketches *any five* of the following :—

- (a) Dowel.
- (b) King closer.
- (c) Reveal.
- (d) Weathered pointing.
- (e) Ashlar masonry.
- (f) Trumpet arch.
- (g) Lintel.
- (h) Skewback.

2. What is meant by 'bond' in brickwork? Explain, with the help of sketches, its object and the principle underlying it.

Draw two successive courses of brickwork, showing the junction of a cross wall one-brick thick with a main wall two-brick thick. (Scale— $\frac{1}{16}$  full size).

3. Explain, with the help of sketches and assumed data, how you would lay a line of stoneware pipes, 1 foot diameter to a depth of 10 feet in average, below ground level. Draw a section longitudinally through the pipes showing the joints in the pipes clearly.

4. You are required to add a 6 feet wide verandah with a sloped Raneegunge tiled roof to an existing single-storeyed building.

Height of plinth—2 feet.

Height of upper end of roof from floor level—8 feet.

Roof slope—3 : 1.

Give sketches approximately to scale, showing the general arrangement and all details of construction.

5. What is meant by Reinforced Concrete? Name the materials required for reinforced concrete work.

A hall 30 ft. by 16 ft. is to be roofed with a reinforced concrete continuous slab, 10 ft. span, 5 inches thick, laid over rolled steel joists  $12'' \times 5''$  @ 30 lb. The walls of the hall are 1' 8" thick. The reinforcement consists of  $\frac{1}{2}$  inch diameter rods spaced 5 inches apart with their centres  $\frac{3}{4}$  inch above the bottom of the slab. Draw approximately to scale (1) a plan, showing the arrangement of the reinforcements as ready for laying the slab; (2) two sections at right angles to each other showing the sections of the slab and the arrangement of the shuttering for laying the slab. Details not given are to be supplied by the candidates.

## SECOND HALF

1. Sketch ordinary appliances for driving piles in the foundation of a building and show by sketches how a pile is driven. When is a pile considered to have been sufficiently driven?

2. A room  $18' \times 12'$  internally has walls 15 inches thick, parapet walls 10 inches thick and 3 feet high. Its roof is made of the following :—

(1) Beams—3 feet apart.

(2) Wooden burgahs.

(3) Two layers of tiles with mortar between.

(4) Lime concrete 5 inches thick.

Give sections of the roof through a rain water down pipe, parallel and at right angles to beams, showing the details of the junction of the parapet wall and roof clearly.

3. Draw a plan and two sections at right angles to each other of a two tier grillage foundation for a stanchion from the following notes :—

Depth of foundation—3 feet.

Base of foundation— $8' \times 8'$ .

Bottom tier consists of ten  $8' \times 4''$  R.S.J.

Top tier consists of three  $14'' \times 6''$  R.S.J.

Size of baseplate of the stanchion— $2' \times 2'$ .

All other details to be supplied by the candidate.

4. Describe with sketches the construction of a partition wall 3 inches thick in a room 10 feet wide. Show also how a door  $7' \times 3\frac{1}{2}'$  can be fixed into the middle of the partition wall.

5. Sketch cross-section of an asphalt-painted road in Calcutta. The roadway is 40 feet wide with 15 feet footpath on either side.

## SURVEYING

Examiners— { MR. T. A. GARLAND, B.Sc., A.M.I.E.,  
A.M.I.C.E.  
,, P. W. CRAKER.  
,, C. V. MILLER, A.C.G.I., B.Sc.,  
A.M.I.STRUCT.E.

*The questions are of equal value*

*Not more than FOUR questions to be answered from EACH half*

## FIRST HALF

1. (a) What is a well conditioned triangle?

Explain why it is important that the triangles used in chain and plain table surveys should be well conditioned.

(b) Explain how to find your position on the map when three plotted stations are visible.

What is the three point problem, and under what conditions is it indeterminate?

2. The following table shows the observations taken in making an open traverse around an obstruction. Assuming that there is no error in the observations, calculate the length and bearing of *AD*.

Line.	Bearing.	Length.
<i>AB</i>	... 120°	12.50 chains.
<i>BC</i>	... 92°	15.32 ..
<i>CD</i>	... 33°	10.34 ..

3. Explain the use of the striding level on a theodolite, and deduce an expression for the correction to be applied to the observed horizontal angle in terms of the angle of inclination of the trunnion axis and the observed vertical angle.

A theodolite when pointed to an elevated station gave the following readings: Vertical angle 29°. The bearing read on the horizontal circle 192° 14' 20". The striding level reading showed that the trunnion axis of the telescope was inclined at 5" to the horizontal, the end on the observer's right being higher. Correct the observed bearing.

4. Summarize the three chief permanent adjustments of the transit theodolite.

5. Give a brief description of the prismatic compass, and make a sectional sketch to show the arrangement of its parts.

Describe how you would carry out an open traverse survey with the prismatic compass and chain, stating what precautions you would take to obtain accurate results.

6. Explain, with the aid of dimensioned sketches, how you would deal with the following obstacles on a chain line:—

(a) A river 200 feet wide, (b) A hill with steep slopes, (c) A large building.

## SECOND HALF

\* 1. When pegging out the centre line of a railway, a point is reached from which it is necessary to deflect the line through an angle of 28° 44'. It is decided to put in a 4° curve. The chainage at the apex is found to be 14,827 ft. from the initial starting point of the railway. Work out all the detailed calculations for setting out the curve, and give a sketch showing



how you would carry out the work. It is necessary to put in pegs at every hundred feet continuously and carry forward the through chainage of the centre line. The length of the radius, tangents, and total length of curve should be taken to the nearest foot only.

2. In Question 1, if, instead of a  $4^\circ$  curve, you are asked to set out a curve with a radius of 1,500 ft., work out the tangential angles and give brief reasons for the greater convenience of using the degree method.

3. You are instructed to carry out the levelling for the section of a road or railway. Describe what adjustments of your level you would check, and, if necessary, how you would do the adjustments. Any make of level may be used.

4. Draw up a field level book, and work out the reduced levels for the list of readings given below according to (a) the rise and fall method, (b) the collimation method. Discuss briefly the relative merits of each method :—

Back sight.	Intermediate sight.	Fore sight.
4.56		
6.71	5.84	
	4.30	4.21
	8.40	
	11.90	
	8.50	
7.08		2.65
	2.50	
		1.42

R.L. of starting point 500.00.

5. Describe what is meant by 'Simpson's Rule.' Under what circumstances is it applicable?

6. Apply Simpson's Rule to find the area of a section, the heights of which above the Railway level, at intervals of 30 feet, are 2, 10, 15, 20, 30, 25, 17.5, 10, 3 feet.

### DRAWING

Examiners— $\left\{ \begin{array}{l} \text{MR. C. R. COPELAND, A.M.I.E., A.M.I.MECH.E.} \\ \text{,, Q. A. RAHMAN, B.Sc.} \\ \text{,, C. R. COPELAND, A.M.I.E., A.M.I.MECH.E.} \\ \text{,, T. A. GARLAND, B.Sc., A.M.I.E.,} \\ \text{A.M.I.C.E.} \end{array} \right.$

*The figures in the margin indicate full marks*

### FIRST HALF

*Two sectional views of a Meyer's expansion valve are supplied*

*You are required to make a  $\frac{1}{2}$  full size scale drawing of the following views only :—*

1. Copy the section on RSTU, complete with dimensions, as shown. 50





2. Project a complete plan from view 1. 60
3. Make a freehand sketch of any type of Universal Coupling with which you are familiar. 40

Or,

4. Sketch a double-riveted, double cover butt joint suitable for the longitudinal seams of a cylindrical boiler, and mark on it the usual proportions. 40

## SECOND HALF

*Answer Question 1 and ANY TWO of the remaining three questions*

1. A rectangular pavilion (plan III attached)  $12' \times 10'$  internally has walls  $1' 3''$  thick. Each side of the pavilion has a semi-circular headed opening 4 feet wide, the springing of the arches is  $6\frac{1}{2}$  feet above the floor and the arches are 10 inches thick. Two feet above the crown of the arches there is a continuous band 6 inches deep and projecting  $2\frac{1}{2}$  inches, and immediately above this there is a vaulted roof semi-circular in section, span 8 feet. Draw an isometric view of the pavilion (scale 2 feet = 1 inch) with the quarter portion *ABC* removed and looking in the direction of the arrow head. 80
2. Give a freehand sketch (approximately to scale) for a gateway for the compound of a residential building with wooden gate 6 feet opening between masonry pillars with compound walls 4 feet high and 10 inches thick on either side. Draw a plan and elevation and give necessary dimensions. 35
3. Give a plan and two sections at right angle to each other through rain water pipe to a suitable scale of a terrace roof 6" thick average over two layers of tiles  $1' 6'' \times 1' 0'' \times 1''$  placed on  $3'' \times 3''$  teak-wood burgahs supported by R.S. joists  $8'' \times 4''$  spaced 5 feet apart for a room  $20' \times 12'$ . The parapet will be  $1' 0''$  high over roof and  $1' 3''$  thick, the supporting walls of the roof being  $1' 8''$  thick on all sides. The cornice will be of  $1' 0''$  projection and  $10\frac{1}{2}''$  depth. 35
4. Two semi-circular vaults each 8 feet span intersect in *C.D.* Draw the intrados resulting from a section taken along the line *EFG*. *FD* is  $\frac{1}{2}$  of *CD*. Scale 2 feet = 1 inch. (Plan IV.) 85
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# B. E. Examination

1933

## MATHEMATICS

(THEORIES.)

Examiners—{ Mr. J. M. BOSE, M.A., B.Sc. (EDIN.)  
,, P. L. GANGULI, M.A., P.R.S.

*The questions are of equal value*

*Not more than FOUR questions to be attempted from EACH half*

### FIRST HALF

1. Explain under what circumstances it is permissible to differentiate under the sign of integration.

Evaluate

$$\int_0^{\infty} \frac{\tan^{-1}(ax)}{x(1+x^2)} dx.$$

If

$$\Gamma(n) = \int_0^{\infty} e^{-x} x^{n-1} dx$$
$$n\Gamma(n) = \Gamma(n+1).$$

prove that

2. Evaluate the following

$$\int_0^{\pi} \log(\sin \theta) d\theta, \quad \int_a^{\beta} \frac{dx}{\sqrt{(x-a)(\beta-x)}}$$
$$\int_0^{\frac{\pi}{2}} \frac{dx}{a^2 \sin^2 x + b^2 \cos^2 x}.$$

3. Explain what is meant by polar subtangent and subnormal.

Obtain an expression for the length of the perpendicular from the pole on any tangent to a conic whose equation is

$$\frac{l}{r} = 1 + e \cos \phi$$

4. Establish the equation to a curve whose—

(1) subtangent is constant,

(2) the angle between the tangent and radius vector is constant.

5. Show how to expand a function by a trigonometric series.

6. Solve any three of the following :—

- (1)  $y^2 dx + (xy + x^2) dy = 0$
- (2)  $y dx - x dy + \log x dx = 0$ .
- (3)  $\frac{d^2 y}{dx^2} - 8 \frac{dy}{dx} + 4y = 0$ .
- (4)  $\frac{d^2 y}{dx^2} + n^2 y = x^4 e^x$ .

### SECOND HALF

1. Prove that the series whose general term is  $u_n$  is convergent or divergent according as

$$\lim \left\{ n \left( \frac{u_n}{u_{n-1}} - 1 \right) \right\} > < 1.$$

Test the convergency of the series

$$\frac{x}{1} + \frac{1}{2} \cdot \frac{x^2}{3} + \frac{1}{2 \cdot 4} \cdot \frac{x^3}{5} + \dots + \frac{1 \cdot 3 \cdot 5 \dots (2n-3)}{2 \cdot 4 \cdot 6 \dots (2n-2)} \cdot \frac{x^{2n-1}}{2n-1} \dots$$

2. Prove that a determinant may be expressed as the sum of the products of the elements of one of its rows or columns by their complementary minors with signs which are alternately plus and minus.

Shew that

$$\begin{vmatrix} b+c & a-b & a \\ c+a & b-c & b \\ a+b & c-a & c \end{vmatrix} = 3abc - a^3 - b^3 - c^3.$$

3. Prove  $\cos n\theta + i \sin n\theta = (\cos \theta + i \sin \theta)^n$ , where  $n$  is a positive or negative integer.

Prove  $\cos \theta = 1 - \frac{\theta^2}{2!} + \frac{\theta^4}{4!} - \dots$

4. Shew that

$$\theta = \tan \theta - \frac{1}{3} \tan^3 \theta + \frac{1}{5} \tan^5 \theta.$$

when  $\theta$  lies between  $-\frac{\pi}{4}$  and  $+\frac{\pi}{4}$ .

Prove  $\frac{\pi}{4} = \frac{1}{2} - \frac{1}{8 \cdot 2^3} + \frac{1}{5 \cdot 2^5} - \dots + \frac{1}{3} - \frac{1}{3 \cdot 3^3} + \frac{1}{5 \cdot 3^5} - \dots$

5. Prove Euler's theorem,

$$e^{i\theta} = \cos \theta + i \sin \theta$$

Reduce  $(a + i\beta)^x + i^y$  to the form  $A + iB$ .

## (APPLICATION.)

Examiners—{ MR. J. M. BOSE, M.A., B.Sc. (EDIN.)  
DR. JYOTIRMAY GHOSH, D.Sc.

*The questions are of equal value*

*Not more than FOUR questions to be attempted from EACH half*

## FIRST HALF

1. What is meant by the principal axes of a lamina? Given the moments and products of inertia of a lamina about any pair of rectangular axes through a given point and lying in the plane of the lamina, show how to find the corresponding quantities about any other two rectangular axes in the plane of the lamina and passing through the same point.

Prove that the momental equivalent of a uniform triangular lamina consists of three particles, each one-third of its mass, placed at the middle points of its sides.

2. Explain D'Alembert's principle and obtain from it the equations of motion of a rigid body moving in two dimensions.

Apply D'Alembert's principle to the following problem :—

The door of a railway carriage, which has its hinges (supposed smooth) towards the engine, stands open at right angles to the length of the train which starts with an acceleration  $f$ . Prove that the door closes in time

$$\sqrt{\left(\frac{a^2 + k^2}{2af}\right)} \int_0^{\frac{\pi}{2}} \frac{d\theta}{\sqrt{\sin \theta}}$$

where  $2a$  is the breadth of the door and  $k$  its radius of gyration about a vertical axis through the centre of mass.

Find also its angular velocity when the door closes.

3. Obtain expressions for the kinetic energy and angular momentum of a rigid body moving in two dimensions.

A bicycle is 'free wheeling' down an inclined plane of inclination  $\alpha$ . The mass of each wheel is  $m$ , its radius is  $a$ , and  $mk^2$  its moment of inertia,  $M$  the mass of the framework and the rider. If the road offers a uniform resistance prove that its acceleration is

$$\frac{(M + 2m) \sin(\alpha - \beta)}{(M + 2m) + \frac{2mk^2}{a^2}} \cos \beta$$

where  $\beta$  is an angle depending on the nature of the road.

4. A four-wheeled railway truck has a total mass  $M$ , the mass and radius of gyration of each pair of wheels and axle being  $m$  and  $k$  respectively. Prove that if it is subjected to a draw bar pull  $P$  its acceleration is

$$\left( \frac{M + \frac{2mk^2}{r^2}}{r^2} \right).$$

Hence show that the proper height of the draw bar is

$$\frac{Mh + \frac{2mk^2}{r}}{M + \frac{2mk^2}{r^2}},$$

$h$  being the height of the centre of gravity of the truck.

5. Obtain the equations of equilibrium of a mass of perfect fluid at rest under the action of external forces.

Apply your equations to find the variation of pressure with height in the case of the atmosphere at rest under gravity.

6. A solid cone of density  $\sigma$  is floating with its axis vertical and vertex downwards in a liquid of density  $\rho$ . Prove that its equilibrium is stable or unstable according as

$$\frac{\sigma}{\rho} > \text{or} < (\cos \alpha)^6$$

where  $\alpha$  is the semi-vertical angle of the cone.

7. A sphere of radius  $R$  and density  $P$  is immersed in a large vessel containing liquid of density  $\sigma$ .

Find the work done in just raising it clear of the liquid.

## SECOND HALF

1. Shew that the resultant of two simple harmonic motions of the same period and in the same straight line is another simple harmonic motion. Under what circumstances is the resultant amplitude maximum?

Represent your results graphically.

2. Shew that the path of a projectile in vacuo is a parabola.

If a gun is capable of projecting bullets with a velocity of 2,000 ft. per sec., find the maximum area which may be commanded by it.

3. If a particle moves in a plane under a central force  $P$ , shew that the differential equation of its path is

$$\frac{d^2u}{d\theta^2} + u = \frac{P}{h^2u^3}$$

If the law of force is that of inverse square, shew that the path is a conic.

4. Shew that a uniform heavy chain hangs in the form of a catenary.

A uniform chain, of length  $2l$  and weight  $W$ , is suspended from two points,  $A$  and  $B$ , in the same horizontal line. A load  $P$  is now suspended from the middle point  $D$  of the string; if  $AB=2a$ , shew how to determine the depth below  $AB$  of the final position of  $D$ .

5. A light inextensible string passes round a rough plane curve and rests in limiting equilibrium; if  $T$  be the tension at a point where its direction makes an angle with the string where it leaves the curve, prove that  $T = T_0 e^{\mu\psi}$ ,  $\mu$  being the coefficient of friction.

If a rope is such that  $\mu = \frac{1}{2}$ , shew that the tension is increased about 535 times by coiling it twice round a post.

6. A string hangs under gravity and it is loaded so that the weight on each element of it is proportional to the horizontal projection of that element; shew that it will hang in the form of a parabola.

Deduce that the chains supporting a suspension bridge by means of vertical rods assume approximately the form of a parabola.



## GEOLOGY AND MINERALOGY.

(CIVIL ENGINEERING)

Examiners—{ Mr. A. K. BANERJEE.  
 „ A. L. COULSON.

*The questions are of equal value*

*Only FOUR questions to be answered from EACH half*

## FIRST HALF

1. In what rocks are fossils found ? Describe how they are preserved, and explain their uses in Stratigraphy.
2. Describe briefly the Gondwana rocks of India. What were the climatic conditions at certain phases of the Gondwana period?
3. Give the characteristics and describe the uses of muscovite, chrysotile, graphite, corundum, talc, and galena.
4. Give a classification of igneous rocks. Name and describe four of the more important kinds of igneous rocks. Explain how the relative age of an igneous rock is determined.
5. Describe the different forms in which ore-deposits occur. Name the chief ores of manganese, tin, aluminium, and zinc.

## SECOND HALF

1. How are sedimentary rocks formed ? Classify them and give brief notes on their various types.
2. Define metamorphism, and describe the effects of contact and dynamic metamorphism.
3. Describe Miller's system of notation, giving the indices of common forms belonging to the different crystallographic systems.
4. Note on the relationship between geological structure and underground water-supply, illustrating your answer with diagrams.
5. Give notes on the various kinds of faults, amplifying your reply with sketches.

## APPLIED PHYSICS

(CIVIL ENGINEERING)

Examiners—{ Mr. A. C. CHAKRABARTI, M.Sc., M.A. (CANTAB.).  
 { Dr. W. A. JENKINS, D.Sc.

*The questions are of equal value*

*Only THREE questions to be attempted from EACH half*

## FIRST HALF

1. Fully discuss the working of an Ammonia-compressing refrigerator. Compare its coefficient of performance with that of an ideal arrangement.
  2. Describe fully the arrangement you would adopt if you have to obtain a continuous record of the temperature of a furnace when it may be varying between 500°C. and 1,200°C.
  3. Describe a Saccharimeter. How is it used in practice ?
  4. Write a short essay on lamps, showing how the efficiencies of the different types vary.
- Is it possible to produce light without producing heat ? If so, how ?

## SECOND HALF

5. The coaxial circular plates are placed in a viscous liquid a short distance apart. Calculate the moment necessary to rotate one of them steadily.

Describe a method of using this principle in finding the viscosity of a liquid.

6. Describe how cathode rays can be used to produce X-rays, and explain what takes place when the X-rays are produced.

7. Discuss the efficiency of the Anode-bend method of rectification.

Describe a detector circuit (with diagram) in which the above principle is used for wireless reception.

8. Write short notes on two of the following :—

- (1) Nature of heat.
- (2) Colour of thin films.
- (3) Radio-activity.
- (4) Polarisation of light.

## TECHNICAL CHEMISTRY AND METALLURGY.

## THEORETICAL PAPER

Examiners—{ PROF. N. N. SEN, M.Sc., A.I.C., A.R.S.M.  
 { DR. ALI KARIM, PH.D. (LOND.), D.I.C.

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

## FIRST HALF

1. How is aluminium extracted on the large scale from bauxite ? Describe the action of acids and alkalies on this metal. Give the composition, properties, and uses of any two aluminium alloys.

2. Write notes on the following :—

Chrome steel; Hadfield steel; Magnolia metal; Babbitt metal; Hot-shortness; Fatigue limit; Hardening; Tempering.

3. Describe, explaining the chemistry involved, the process of making steel in an acid open hearth furnace. Compare the qualities and characteristics of steels made by the different methods.

4. Review the changes undergone by the following steels during cooling from the liquid state to the room temperature : (a) 0.8% carbon; (b) 0.9% carbon; (c) 1.8% carbon.

## SECOND HALF

5. Fully describe a modern method of manufacturing Portland Cement, and explain the chemistry of the setting and hardening of cement. Give the specification of Portland Cement as drawn up by the British Standard Institute.

6. What are the principal impurities generally found in natural water ? Briefly state how you would detect any four of these impurities. Which of these impurities are particularly harmful for (a) steam raising, (b) irrigation, and (c) drinking ?

7. What essential qualities would you look for in a good blast furnace coke, and why ? How is this coke manufactured in a modern by-product plant ? Give the characteristics and uses of the principal by-products.

8. Write short notes on (1) Gun metal, (2) Brass, (3) Monel metal, (4) Type metal, (5) Hard solder, and (6) Plastic bronze.

9. Write an essay on the protection of iron structures against corrosion.

## APPLIED PHYSICS

(METROLOGY)

Examiners— { MR. EDWARD CLAPP, GRAD. M.I.MECH.E.  
 „ R. WOLFENDEN, M.B.E., M.Sc.,  
 M.I.MECH.E.

Not more than THREE questions to be answered from each half

## FIRST HALF

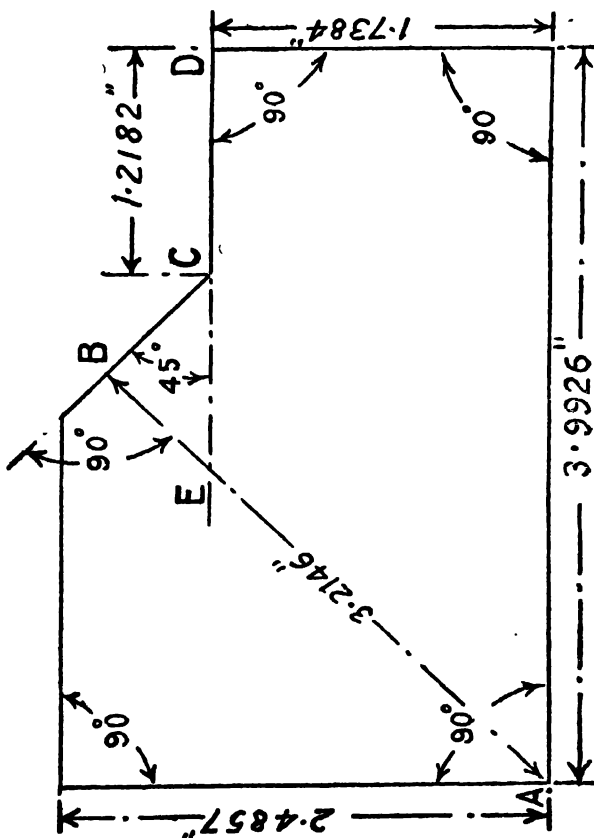
The figures in the margin indicate full marks

1. Sketch and describe any type of 'Measuring' machine, with special reference to the measuring head. How would you proceed to use the machine in the manufacture of a test piece nominal 6.3842 inches?

30

2. "

35



If you were supplied with the above 'Form' gauge, how would you check—

- (a) the right angles;
- (b) the overall dimensions;
- (c) the base of the angular form  $CD$ ;
- (d) the angle  $BCE$ ;
- (e) the perpendicular  $AB$ ?

3. Write brief notes on the effects produced by the introduction of the following elements in 'high-speed' steel: (a) carbon; (b) nickel; (c) manganese; (d) chromium; (e) tungsten; (f) molybdenum; (g) vanadium (h) aluminium. 85

What would you consider a typical 'high-speed' steel?

4. Describe the process of case-hardening. What use is there for case-hardened steels; and how does it compare with ordinary steels in production and properties? Due to prolonged heating ordinary low carbon steel is susceptible to brittleness: name a steel suitable for case-hardening. How does it compare with ordinary steels? 80

5. Explain the working of the ideal grinding wheel. What are the essential characteristics of a grinding wheel? 80

Discuss the term 'bond,' and what effect has the bonding on a grinding wheel? When would you select (a) a hard bond; and (b) a soft bond?

## SECOND HALF

*All questions are of equal value*

1. Describe what is meant by the following types of fit in practical engineering :-

Force fit; Drive fit; Push fit; Running fit.

Define 'Tolerance' and 'Allowance.'

Describe, with sketches, the Newall adjustable external limit gauges, and give two methods of adjusting the measuring points.

2. Mention the various errors which may exist in an ordinary micrometer, and describe how you would test for them.

Describe, with sketches, how to convert an ordinary micrometer into a High and Low limit gauge by means of limit arms.

3. Describe, with sketches, some of the uses of 'Johannson' or 'Swedish' gauges in checking (a) Gap gauges; (b) Form gauges; (c) Ring gauges.

How are Swedish gauges manufactured?

4. Describe, in detail, how the various elements of a screw plug gauge can be checked.

5. A taper hole in a plate 1.3 inches thick is 2.12 inches diameter at the large end. The sides of the hole form part of a cone having an angle of 50 degrees at the vertex. In order to test the correct size of the hole a hard steel ball 1.8 inches in diameter is dropped into the hole so that it rests on the sides of the hole and projects from the plate at the large end of the tapered hole. A plate of thickness 0.251 inches is placed across the bottom of the hole and the distance from the top of the projecting ball to the outside of this plate is measured by a micrometer and found to be 2.88 inches. Is the taper hole of correct dimensions?

## TECHNICAL CHEMISTRY AND METALLURGY

## PRACTICAL PAPER

1. Estimate the total quantity of sodium carbonate you require to neutralize the acidity of the given solution, and determine the total amount of sulphuric acid present.

2. Submit your practical note-book.

## Professional Section

## ROADS AND RAILWAYS

(CIVIL ENGINEERING)

Examiners— { MR. T. A. GARLAND, B.Sc., A.M.I.E.,  
A.M.I.C.E.  
,, J. M. RAY, B.A., C.E., M.I.E.

*The questions are of equal value*

*Four questions only are to be attempted from EACH half*

## FIRST HALF

1. The bearings of two successive railway tangents  $AB$  and  $BC$  are respectively  $98^{\circ} 24'$  and  $130^{\circ} 36'$ . They are to be connected by a circular curve of 1,800 feet radius with transition curves at each end. Draw up a table of deflection angles for setting out both the transition and the circular curves. The pegs on the transition curve to be about 50 feet apart and those on the circular curve 100 feet apart.

Describe clearly the actual field work.

The following data for the transition curve is given :—

$$\text{Length of transition curve } L = \frac{4OGV^3}{R}.$$

$$\text{Shift of } \quad \quad \quad S = \frac{L^3}{24R}.$$

$$\text{Velocity of train } \quad \quad \quad \dots \quad V = 40 \text{ M P.H.}$$

$$\text{Gauge } \quad \quad \quad \dots \quad G = 5' 6''.$$

2. Summarize the various items which constitute the total tractive resistance of a train on a curved track which is situated on a gradient, and state the relative magnitude of each item. What is meant by compensation of gradient for curvature?

3. Describe with the aid of dimensioned sketches, the various component parts of a track laid with flat footed rails and timber sleepers. Compare this type of track with one laid with bull headed rails and D.O. plate sleepers, and discuss the relative merits and defects of each type.

4. Prove the prismoidal formula and use it to determine the volume of earth works in the following case :—

An embankment having a formation width of 20 feet and side slopes of 2 to 1 is built on level ground. The height of the embankment above the ground is given in the following table. Calculate the total volume of the embankment in cubic yards.

Chainage	...	...	...	0	1	2	3	4	5
Height of embankment (feet)	...	...	...	8.4	9.5	10.6	11.7	11.2	10.8

Your calculations should be made in tabular form.

5. What is meant by the terms :—

Free haul and over haul, borrow and waste?

How can the mass curve be used to determine the average overhaul? Illustrate your reply by means of diagrams.

6. Sketch the following and write a brief note about each :—

(a) Dog spike, (b) Jim crow, (c) Tongue rail, (d) Marshalling grid, (e) Double slip, (f) Rail creep, (g) Derailing switch.

## SECOND HALF

1. What do you understand by the following terms : (1) Obligatory points, (2) Zigzags, (3) Boning staves, (4) Profiles, (5) Formation level, (6) Hydraulic mean depth, (7) Afflux, (8) Invert, (9) Quarry chart, (10) Arboriculture? 50

2. Name the materials used for metalling roads in India. What materials are generally used in Bengal? 50

What is 'soling'? What is its object? What does it generally consist of?

Sketch a cross section of a first class district road in the plains in 2' bank, noting all dimensions. What width of metalling will you provide in a second class road?

3. How often does a stone metalled road require renewal under heavy cart traffic? What thickness of renewal coating is generally provided? What is the best season for doing renewals? State the type of roller (giving weight) suitable for consolidating (a) stone metal, (b) moorum, (c) brick metal, and (d) kankar. What are the usual gauges of brick stone and kankar metal? 50

4. Find the discharge of a small stream having 2 sq. miles of catchment area by Dickens's formula ( $D = CM^{\frac{2}{3}}$ , where  $D$ =discharge in c.ft. per sec.,  $C$ =800, and  $M$ =catchment area in sq. miles). Design a road bridge across the stream based on the discharge that you find and the following data :— 50

Top width of stream=50'.

Bottom width of stream=40'.

Depth of stream=8' below ground level.

Bed=hard rock.

Flood level=6' above bed.

A longitudinal section of the bridge is required (it need not be drawn to scale but must be fully dimensioned).

5. What do you know of (1) Submerged Bridge, (2) Raised and vented causeway, and (3) Flush causeway? Explain each with sketches. 50

6. You have to trace a hill road up to the top B of a spur from the toe A up to which your alignment is completed. The horizontal distance between A and B is about 9,000' and the height of the spur is 300'. Explain how you will proceed with the work, particularly mention- 50

ing the instrument you will use, the method of using it, and the gradient that you will mainly adopt. (Fig. 1.)

Point *B* can be reached along both sides of the spur. State the considerations by which you will be guided to choose the particular side along which you will carry the trace.

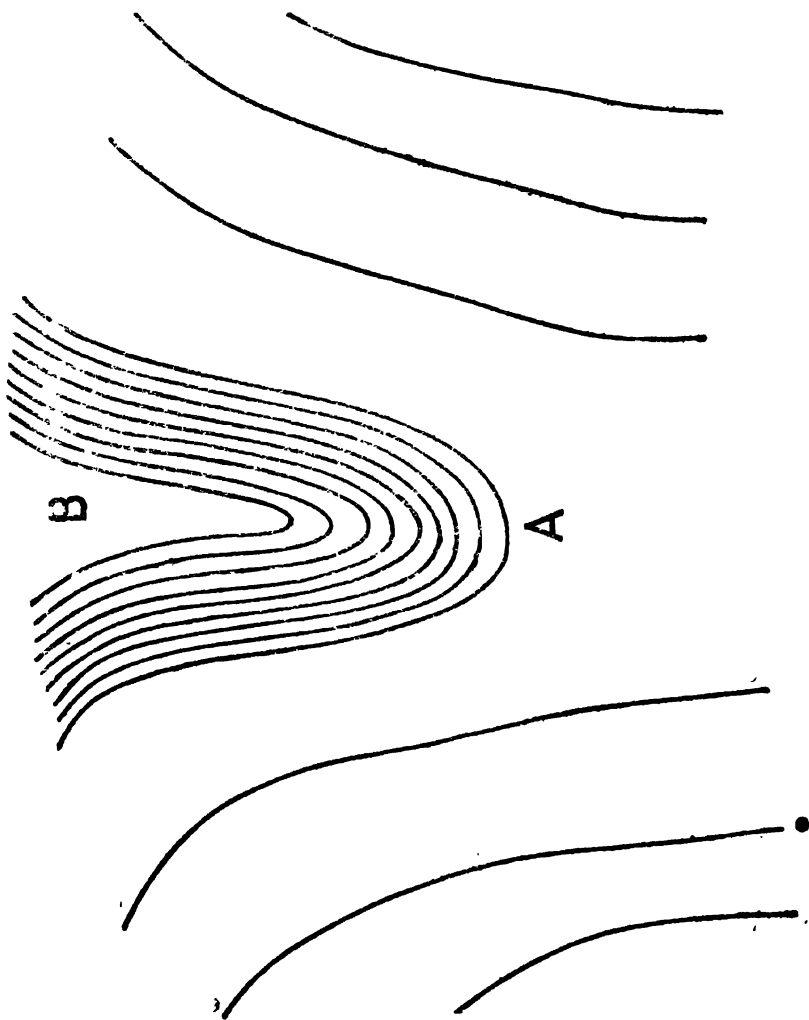


FIG. 1.

## IRRIGATION AND SANTARY ENGINEERING

Examiners—{ Mr. R. R. GHOSH, B.E.  
 ,, F. C. GRIFFIN, M.I.C.E., M.I.E.

*The questions are of equal value*

*Only FOUR questions to be answered from EACH half*

## FIRST HALF

1. Describe the method adopted in India of distribution of water by the 'tatil' system. What are the advantages of this system?

2. By a roughly drawn plan, show the arrangements at the head-works of a permanent canal fed from a hill stream. Indicate clear the position of (1) Under-sluices, (2) Head sluices, and (3) Weir; and state briefly the object of constructing each of these works.

3. Draw a dimensioned sketch cross section of a dam or 'bund' suitable for impounding 20 feet of water above ground level at site of dam. The soil at the dam site is permeable for a depth of 4 feet, but underneath this there is an impermeable layer. Figure both slopes, and describe the methods you would adopt to make the dam water-tight and to prevent erosion of its faces.

4. What are the chief characteristics of a Delta river? What main operations are connected with a delta project, and why is drainage a necessary accompaniment to irrigation?

5. A canal is 3 feet deep, 40 feet wide at the bottom, with slopes of  $1\frac{1}{2}$  to 1, and a fall of 1 in 5875. Design a suitable branch channel to carry one-sixth part of the water, and find the fall necessary to give the water the same velocity as in the canal. Make the bed of branch, at the junction, at the same level as the bed of the main channel, and allow a head of 3 inches for the branch head sluice.

[C may be taken equal to  $\sqrt{\frac{2g}{\mu}}$ , and  $\mu = 0.006 \left(1 + \frac{4}{\gamma}\right)$ .]

6. What do you understand by the term catchment basin of a river? How is it determined? State briefly two independent methods of ascertaining the flood discharge of a river at any given point.

## SECOND HALF

1. Describe how a 5-inch tube well is usually constructed in Lower Bengal. Explain what is meant by the following expressions: Artesian conditions; Cone of depression; Depression head; Shrouding; Yield.

What are the impurities commonly found in tube well water?

2. Make a dimensioned sketch of a mechanical gravity filter capable of filtering at the rate of 5,000 gallons per hour. Explain how the filtration is effected, and state the advantages and disadvantages of this type of filter as compared with a pressure filter.

What is meant by—

(a) Filtration head,

(b) Sterilization?

3. Make a sketch of an Indian type water closet on the first floor of a building, shewing all pipes and fittings inside and outside the house down to the connection pit. Describe the functions of the various parts, and shew how the flushing tank works. Shew how a joint is made between two pieces of lead pipe.

4. Describe and shew by cross sections the different kinds of sewers in use in Bengal. State briefly how the different kinds of pipes you mention



are made. Describe the methods whereby the correctness of the line and level is ensured, also how access is given and connections are made.

5. Describe the system of sewage disposal by means of activated sludge on the surface aeration system. Mention the various processes through which the sewage passes, including the disposal of surplus sludge. What are the by-products of a sewage works, and how can they be utilized?

## APPLIED MECHANICS

(CIVIL ENGINEERING)

Examiners— } MR. PULINBIHARI GHOSH, B.Sc., B.E., A.M.I.E.  
 ,, P. N. BANERJEE, M.A., M.I.E.

*A handbook of steel sections such as Dorman Long's may be used*

*The figures in the margin indicate full marks*

*Answer questions to the value of 200 marks from the first half*

### FIRST HALF

1. Why is a bridge given camber during erection? State a rough rule for estimating the amount to be provided. What would be the effect if the camber was not provided? 40

A simple bridge is formed of telegraph poles, laid side by side, with all the butt ends on one abutment. If  $Z$  is the modulus of section at the butt end, and  $Zx$  the modulus of section  $x$  inches from the butt end,  $Zx = Z - 0.3x$ . Span of the bridge is 30 feet. Diameter of a pole at the butt end is 12 inches. Find the position of the most highly stressed section when the bridge is uniformly loaded.

2. From Rankine's theory of earth pressure deduce a formula for the minimum depth of foundation. 40

Determine the necessary width and depth of a concrete foundation which supports a wall having a load of 6 tons per foot run on the base. The bearing power of the soil is  $1\frac{1}{2}$  tons per square foot and the angle of repose  $36^\circ$ . The weights of concrete and earth are 150 lb. and 112 lb. per cubic foot respectively.

3. The equation of an arched rib, hinged at the springings and 60  
 crown is  $y = x + \frac{x^3}{40}$ , the origin being the left hand support. The span

and rise are 40 feet and 20 feet respectively. The left hand half is loaded with a uniformly distributed load of 1 ton per foot run. Find the normal thrusts and radial shearing forces at the left hand support and at a section 10 feet from it measured horizontally. Draw the linear arch.

4. A mild steel tension member is subjected to a pull of 65 tons. 60  
 Design a suitable section for the member and also a butt joint with double cover plates :

Diameter of rivet holes	... $\frac{7}{8}$ inch.
Safe tensile stress in steel	... 7.5 tons per sq. in.
Safe bearing stress in steel	... 10 tons/sq. inch.
Safe shearing stress in steel	... 5 tons/sq. inch.

Double shear may be taken equal to  $1\frac{1}{2}$  times single shear.  
 Find, also, the efficiency of the joint.

5. A plate girder, 50 ft. span, 48 inches deep over flange angles and 0.5 inch thick, carries a uniformly distributed load of 150 tons. Each flange consists of two  $6'' \times 6'' \times \frac{1}{4}''$  angles and two plates each  $14'' \times \frac{1}{4}''$  at the central section. Assuming that  $\frac{1}{4}$ th of the web area can resist bending moment, calculate the necessary lengths of the flange plates. 60

Using  $\frac{3}{8}$  inch diameter rivets and allowing 5 tons per square inch in shear and 10 tons per sq. inch in bearing, calculate the pitch of rivets for attaching the flange angles to the web, for a length of 5 feet from one end, taking the pitch to be uniform for that length. Indicate, also, by means of a table how you would determine the pitch for the rest of the girder.

6. Design a reinforced concrete cantilever wall to retain earth whose weight is 120 lb. per cubic foot and angle of repose 30 degrees, the height of the wall being 16 feet from the bottom of the slab and the earth surface horizontal with the top of the wall. Select reasonable working stresses :— 60

Weight of concrete ... 150 lb. per cu. foot.

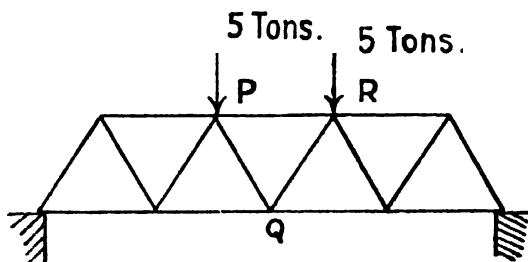
Maximum pressure on soil not to exceed 2 tons per sq. foot.

Coefficient of friction of the concrete and the earth beneath it may be taken as  $\frac{1}{4}$ .

## SECOND HALF

*Only FOUR questions are to be answered*

1. Find graphically the stresses in the members of a Warren girder loaded as shown in sketch. Verify the stresses in the members PQ and PR by the method of sections.



2. Show how you will determine the deflection in a beam of uniform section with evenly distributed load, ends being fixed.

From the above deduce the deflection in an I beam  $20'' \times 6\frac{1}{2}''$  @ 65 lbs. span 36' 0", load  $\frac{1}{2}$  ton per foot run.

3. A culvert, 20' span, is bridged by two R.S. beams, each carrying a dead load of 1,900 lbs., including its own weight. A road-roller, wheels 10' apart, passes over the culvert, the reactions from the front and back wheels being  $4\frac{1}{2}$  tons and 6 tons respectively. Find the maximum B.M. and maximum shear, and design a suitable R.S. beam, the stress in it being restricted to  $7\frac{1}{2}$  tons/ $\square''$ .

4. The reinforcement in a R.C. beam 21" deep by 10" wide consists of four  $\frac{1}{2}$  dr. M.S. rods placed 1" from the bottom of the beam, which is freely supported at the ends. If the span is 20', find the uniformly distributed load the beam will carry, assuming  $m=15$ , and maximum intensity of compressive stress in concrete 600 lbs./ $\square''$ . What is the tensile stress set up in the steel for this load?

5. The maximum safe stress allowable to cable in a suspension bridge, 600' span and 40' dip, is 420 tons total. Find the total uniform load per foot the bridge can carry.

## HYDRAULICS

### (CIVIL ENGINEERING)

Examiners— { Mr. T. A. GARLAND, B.Sc., A.M.I.E.,  
A.M.I.C.E.  
,, R. WOLFENDEN, M.B.E., M.Sc.,  
M.I.MECH.E., M.I.E. (IND.),  
BARRISTER-AT-LAW.

*The questions are of equal value*

*Four questions only to be attempted from EACH half*

### FIRST HALF

1. A pelton wheel develops a horse-power of 2,000 under a head of 2,500 feet. The wheel diameter is 5 feet. Suggest a suitable speed for the wheel and the area for the nozzle, assuming the loss of head in the pipe line is 200 feet.

Efficiency of wheel 86 per cent.

2. State and prove the principle of Bernouilli.

A Venturi contraction is introduced into a vertical pipe; the throat is 4 feet above the beginning of the convergence, the area of the pipe is 2 square feet and that of the throat is 0.40 square feet. If the difference of the pressure gauge readings at the throat and in the pipe at a point 4 feet 6 inches below the throat is 12 lbs. per square inch, what is the flow in the pipe?

3. In an outward flow turbine supplied with 180 cubic feet of water per second and making 200 r.p.m. the internal and external diameters of the wheel are 6 feet and 7 feet 6 inches respectively, and the effective width of the wheel face at inlet and outlet is 9 inches. The head on the wheel is 115 feet and the discharge is free and radial. Neglecting the thickness of the vanes and friction losses, determine the angles of the vanes at entrance and exit and sketch a vane showing these angles.

4. The impeller of a centrifugal pump has an external diameter of 12 inches and an internal diameter of 6 inches. If full of water, with the discharge pipe closed, what would be the difference of pressures at the inner and outer periphery corresponding to a speed of 300 r.p.m.?

5. An axial flow impulse turbine of the Girard type has the following dimensions: effective head 350 feet, mean diameter of runner 4 feet, guide blade angle 25°, runner blade angle at receiving tip 45° and at the discharging tip 20°, width of blades at receiving tips 3 inches and at discharging tips 10 inches. Assuming a coefficient of velocity of 0.95 for the guide blades, find the speed of the turbine so that the water shall pass on the runner without shock and, assuming that with full admission the runner is 0.8 full at inlet, determine the horse-power developed at this speed.

6. A single acting reciprocating pump has a plunger diameter of 5 inches and a stroke of 8 inches. The suction pipe is 3 inches diameter and 15 feet long and the water level in the sump is 8 feet below the axis of the pump cylinder.

Assuming separation to take place at an absolute head of 3 feet of water, find the maximum speed at which the pump can work so that separation shall not take place if the barometer reads 29.5 inches of mercury.

What horse-power is expended in overcoming friction in the suction pipe at this speed?

There is no air vessel fitted to the suction pipe.  $f=0.0075$ .

### SECOND HALF

1. (a) Establish a formula of the form

$$Q = k \left( b - \frac{c}{n} h \right) h^{\frac{3}{2}}$$

for the flow over a rectangular notch.

(b) Sketch a partially submerged weir and show how to estimate the flow over it.

2. Water flows from a reservoir whose surface level is 150 feet above the datum into a reservoir whose top water level is 125 feet above datum. Length of pipe 5 miles. Diameter of pipe 3 feet. Find the velocity of water in the pipe and the rate of discharge into the tank.

If a valve on the inlet to the lower tank is closed so as to reduce the velocity of flow to one half of its original value, what will be the reading on a pressure gauge let into the pipe on the approach side of the valve. Select your own values for the friction coefficient.

3. What is the advantage of a submerged orifice for gauging purposes?

At a submerged orifice 18 inches by 12 inches the water stands 12 inches higher on the approach side than on the downstream side. Find the width of a rectangular notch to take the flow from this orifice with a depth of water on the sill of 8 inches. Select your own coefficients and neglect velocity of approach.

4. Deduce a general expression for the velocity of flow in an open channel.

What is meant by the term 'critical velocity' for a channel? An irrigation channel has a bottom width of 100 feet and a depth of 10 feet. Side slopes 1 to 1. Slope of channel 1 foot in 4 miles. Find the discharge in cubic feet per second. Select your own constants.

5. Give a short account of the results of experiments on the loss of head at bends and elbows.

8 gallons of water per second flow through a pipe 6 inches in diameter in which there is a right angled bend. What is the resultant force exerted by the water on the bend? Neglect friction.

6. The width of a lock is 12 feet. Width of each gate  $6\frac{1}{2}$  feet. Height of water inside lock 12 feet. Height of water outside lock 6 feet. Find the resultant pressure on each gate and the pressure between the gates.

## MECHANICAL ENGINEERING

(CIVIL ENGINEERING)

Examiners— $\left\{ \begin{array}{l} \text{MR. J. RIFFKIN, B.Sc., DIP.R.T.C.,} \\ \text{A.M.I.MECH.E., F.R.ECONS.} \\ \text{N. COOKE, B.Sc.} \end{array} \right.$

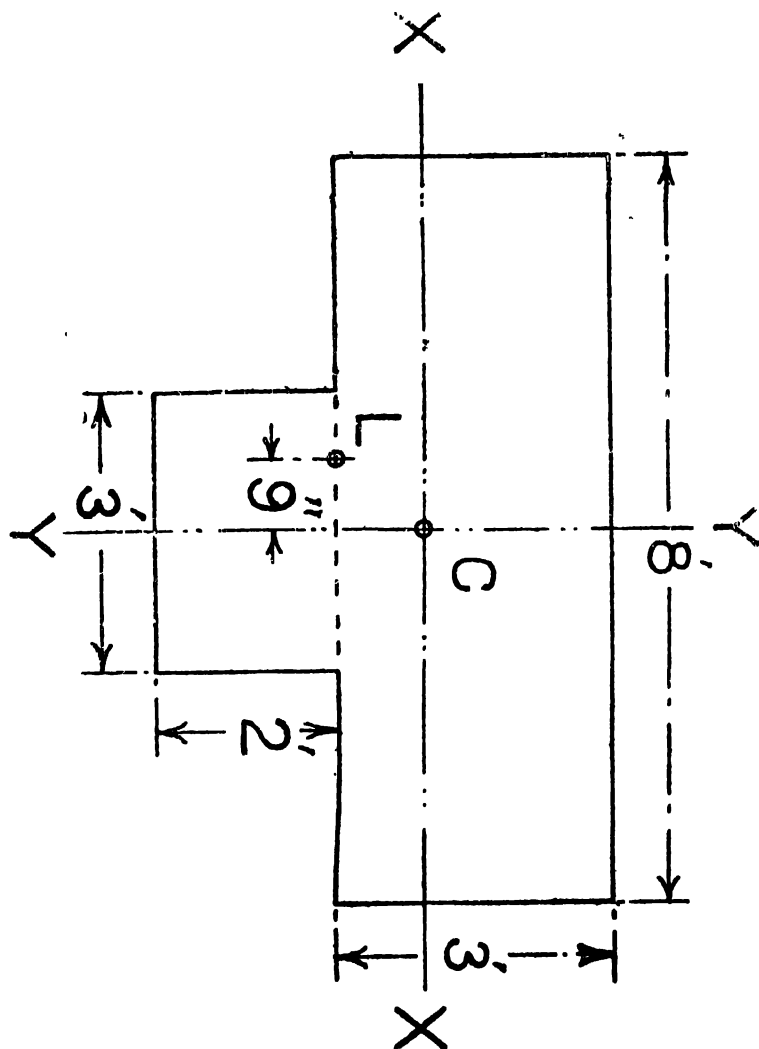
*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

### FIRST HALF

1. The section of a masonry pier has the form and dimensions shown in the figure,  $G$  being the centroid of the section. Under a particular loading

the resultant normal force on the section passes through the point  $L$ , distant 9 inches from the principal axis  $YY$  and 1 foot from  $XX$ .



Determine the magnitude of the resultant normal force if the intensity of compressive stress is not to exceed 7 tons/ft.<sup>2</sup> and draw the position of the neutral axis.

2. A simply supported beam of I section, 6 inches deep and 5 inches wide, the flanges and web each  $\frac{1}{2}$  inch thick, carries a central load on a 6 ft. span. Find the ratio of the deflections due to shearing and bending. Assume  $E/G=2.5$ , and  $I=43.125$  inches.

3. A compound tube is made by shrinking one tube on another, the final dimensions being : external diameter 12 inches, internal diameter 8 inches, diameter at the junction of tubes 10 inches. The radial pressure at the junction is  $1,100 \text{ lb./in}^2$ . The compound tube is subjected to an internal fluid pressure of  $10,000 \text{ lb./in}^2$ . Show by a diagram how the hoop stress varies over the wall of the compound tube and compare it with that over a solid tube of 12 inches external diameter and 2 inches thick under the same internal fluid pressure of  $10,000 \text{ lb./in}^2$ .

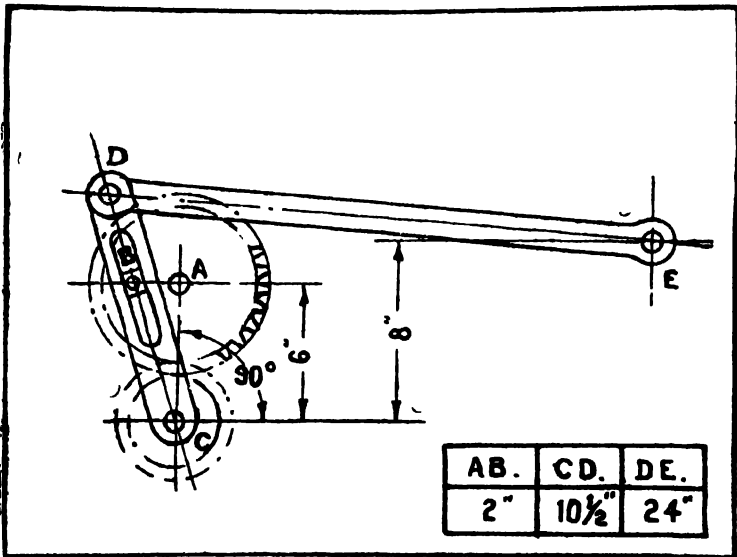
4. A beam of I section 12 inches deep, 6 inches wide, flanges  $\frac{3}{4}$  inch thick, and web  $\frac{1}{2}$  inch thick, rests on supports 40 inches apart and carries a load of 5 tons at the middle of the span. Draw to scale a diagram showing the variation of shear stress on a vertical section. What percentage of the total shearing force is taken by the web?

5. A helical spring is made from a piece of steel wire  $\frac{1}{2}$  inch in diameter and 5 feet long. The mean diameter of the coils is 3 inches. The spring is subjected to an axial load of 2 lb. Find the deflection when the inclination of the coils to a plane normal to the axis of the spring is  $0^\circ$ ,  $10^\circ$ ,  $20^\circ$ ,  $30^\circ$ , and  $45^\circ$ . Draw a graph illustrating the effects of obliquity upon the deflection.

### SECOND HALF

1. In the crank and slotted link shaping machine mechanism shewn in the attached figure, the crank rotates at 50 r.p.m.

Plot out the velocity of the run during the cutting and return strokes on a stroke base, and determine its acceleration when the angle  $BAC$  is a right angle.



2. A worm gear used for barring round a large engine by hand consists of a single start worm of  $1\frac{1}{2}"$  pitch engaging with a worm wheel of 100 teeth. The pitch diameter of the worm is  $4\frac{1}{2}"$  and its thrust is taken on a collar of mean diameter 5". The worm is rotated by a ratchet lever of mean length 5 ft.

If the starting torque required at the crank shaft is 4 foot-tons, calculate the effort in pounds required at the lever to move the engine, and hence find the efficiency of the combination ( $\mu = 0.15$  for both worm and thrust).

Why is the arrangement described unsuitable for anything but a slow movement of this nature?

3. A belt is required to transmit 15 H.P. between two shafts 8 feet apart. The diameters of the pulleys are 15" and 48" respectively and the speed of the larger is 200 r.p.m.

Calculate the tensions in the slack and tight sides of the belt neglecting slip. ( $\mu = 0.4$ .)

4. Describe, with the aid of plain simple sketches, the action of any straight line motion with which you are familiar. Prove that the motion over the working range is actually a close approximation to a straight line.

5. The following particulars apply to a locomotive engine :—

Stroke	...	...	24"
Length of connecting rod	...	...	4' 6"
Weight of reciprocating parts	...	...	300 lbs.
R.P.M. at full speed	...	...	300

Plot the inertia forces, on a stroke basis, determining not less than 5 points on the curve. If the mean radius of the balance weights is 24", how much weight would be required to balance out (approximately) the reciprocating forces only?

## ELECTRICAL ENGINEERING

Examiners— $\left\{ \begin{array}{l} \text{Mr. J. D. CHAUDHURY, B.S.} \\ \text{,, A. K. DAS, B.Sc.} \\ \text{,, A. C. BANERJEE.} \end{array} \right.$

*The questions are of equal value*

### FIRST HALF

*Not more than THREE questions to be answered from this half*

1. (a) Two 400 K.W. 460 volts 500 r.p.m. D.C. Shunt Generators are to be tested for efficiency and heat run. Describe the most suitable method to carry out the above test.

(b) How would you set the brushes mid in any one of the above machines?

2. (a) Draw a complete diagram of connections for a Shunt Motor Starter provided with a 'No-volt' and 'Overload' release.

(b) If the armature resistance of a shunt motor is 42 and it makes 600 r.p.m. at no load, taking 4 amperes at 220 volts, what will the speed be when the armature current is raised by increasing the load to 20, 30, and 40 amperes respectively assuming constant field?

3. A 3 K.V.A. 220/50 volt. transformer gives on test the following results :—

No load test at rated voltages—220 volts.

Amps.	...	62
Watts	...	70

Short circuit test at full load current.

Watts	...	100
Volt	...	20 on the primary.

Find out the efficiency and regulation of the transformer at .8 Power factor.

4. A three-phase star connected Alternator supplies a delta connected Induction motor, the latter having an efficiency of 92 per cent. and a power factor of .83. The motor pumps 2,500 gallons of water per minute against a head of 990 feet, the pump efficiency being 75 per cent. Calculate the current in each phase of the Alternator and Induction motor if the line voltage is 2,000 volts.

5. (a) A substation is equipped with a 75 K.W. Rotary-converter: the D.C. voltage is 220 volts. The A.C. voltage from the generating station is 400 volts. The rotary converter has six phase winding. The supply frequency is 50 cycles per sec. Find the rating of the transformer.

(b) Draw a diagram of the connections for the above outfit.

## SECOND HALF

*Not more than FOUR questions to be answered from this half.*

1. (a) How would you prove that a compound-wound D.C. generator can be made to give practically constant pressure or terminal voltage at all loads? What is meant by 'over-compounding'?

(b) A shunt D.C. generator has a full load current of 200 amperes at 225 volts. The stray losses are 1,500 watts and the shunt resistance is 75 ohms. If the efficiency at full load is 90 per cent., find (1) the armature resistance, and (2) the load current at which the efficiency will be a maximum.

2. (a) Give a general explanation of the action of a telephone, and describe some form of transmitter.

(b) An accumulator battery of 50 volts and of negligible resistance has a Telegraph closed circuit joined to it without any battery at the other end—the resistances of the 'earths' at the two ends being 10 and 5 ohms respectively. The line wire consists of 50 miles of 300 lbs. per mile iron wire and the resistance of a mile of wire of the same material but twice the weight per mile is known to be 10 ohms. Presuming the minimum working current on a simplex Telegraph circuit to be 10 milli-amperes, find out the maximum number of stations, with a sounder having a resistance of 500 ohms at each station, that can be efficiently introduced on the circuit in question.

3. (a) Describe, with a diagram, the nature and action of a 'feeder booster' in the case of a two-wire D.C. power distribution circuit.

(b) The pressure in a long feeder falls from 250 to 225 volts and the current in the circuit is 300 amperes. By means of a motor-generator, the pressure is raised to 250 volts. If the efficiency of the booster be 88 per cent., find out the current taken by the motor.

4. (a) Shew mathematically, with the analogy of D.C. circuits, how the resultant impedance of a number of A.C. circuits in series or in parallel can be deduced, also how the total current and its phase angle can be calculated, in the case of a number of A.C. circuits in parallel, by means of a vector diagram.

(b) What is the impedance of a current of 12 ohms resistance 0.12 henry inductance, and 25 microfarad capacity, when the frequency is 100? Will the current lag behind the applied voltage or lead, and by what angle?

5. What is the 'regulation' and 'percentage regulation' of a transformer?

Explain, with the necessary diagram, the graphical method of determining the voltage drop in a transfer on full load at any power factor.

6. (a) Shew that, in the case of polyphase currents, the use of more than three phases is not calculated to give any net advantage as compared with three-phase currents. A diagram should elucidate your answer.

(b) Mention the peculiar features and advantages of a 'squirrel cage' induction motor and what modifications become necessary in its rotar resistance when such a motor is used for crane or hoist work.



## PRINCIPLES OF ARCHITECTURAL DESIGN

(CIVIL ENGINEERING)

Examiners—{ MR. PULINBIHARI GHOSH, B.Sc., B.E., A.M.I.E.  
 „ T. EDMONDSON.

*The figures in the margin indicate full marks*

## FIRST HALF

N.B.—Answer questions to the value of 100 marks

*Question No. 1 is compulsory*

1. What is meant by an 'order' of architecture? Write a comparative note with sketches on the Greek and Roman orders of architecture. Mention the classes of buildings in which each particular order is suitable. 40
2. Describe, with sketches, the constructive principles of Roman and Byzantine domes, noting the special features in each of them. 25
3. Write a brief history of Gothic architecture, noting its special features. Illustrate your answer with sketches. 35
4. Sketch a plan and two elevations (approximately to scale) of a Darwan's lodge to be located near the gateway of a college compound in which the buildings are in Gothic style. Dimensions of the lodge are left to the discretion of the candidates. 60

## SECOND HALF

Design a main entrance doorway 4' 6" wide  $\times$  9' 0" high masonry opening, suitable for an entrance to a large block of offices fronting on to a street in a large city. Assume the cill of the doorway to be 1' 6" above street pavement level, and do not allow any steps, architectural features, or hood to project more than 2' 3" beyond the main wall face of the building.

*Drawings required.*

1. A rough free-hand sketch elevation from the street. Approx. scale  $\frac{1}{4}" = 1' 0"$ . 25
2. A detail elevation to a scale of  $1" = 1' 0"$ , shewing design of the door shutters, etc., and the masonry, etc., surrounding the opening. The masonry may be of stone, lime plastered brickwork, or concrete. 50
3. A section to a scale of  $1" = 1' 0"$ . 25

*Note.*—The choice of architectural style of the design is left to the candidate.

## THEORY OF MACHINES

(MECHANICAL ENGINEERING)

Examiners—{ MR. P. C. GANGULI, B.Sc. (GLAS.).  
 „ R. WOLFENDEN, M.B.E., M.Sc.,  
 M.I.MECH.E., M.I.E. (IND.),  
 BARRISTER-AT-LAW.

*The questions are of equal value**Not more than THREE questions to be attempted from EACH half***FIRST HALF**

1. A turbine disc has a central hole 4 in. in diameter. It is supported on a knife edge at one end of a diameter of the hole and parallel with the axis, and in this position the time of a small double oscillation is 3.2 secs. Calculate the radius of gyration of the disc. Assume that the centre of gravity of the disc coincides with the centre of the hole.

If the centre of gravity is not exactly in the centre of the disc, show how by four observations similar to the above the exact position of the centre of gravity may be found.

2. A friction cone is made up of two conical frusta, one of which fits inside the other, the smallest radius of the area of contact is  $r$ , and the largest radius is  $R$ . The vertical angle of the cone is  $2\alpha$ . Let  $P$  be the force acting along the common axis, pushing the inner cone into outer one. Assuming the pressure to be uniformly distributed over the area, find the greatest turning moment about the axis of the cone, which can be transmitted without slip taking place.

A friction clutch is to be designed to transmit 25 h.p. at 600 revs. per min.; the taper of the cones is to be 1 in 15 and the coefficient of friction 0.18. If the mean diameter of the area of contact be 8 in., what axial force is necessary to just prevent slipping.

3. In a Hartnell governor the ball radius is 6 in. when the ball arm, which has a length of 5 in., is vertical and the governor is running at the mean speed of 300 r.p.m. The sleeve arm has a length of  $4\frac{1}{2}$  in., and the balls each weigh 5 lb. The sleeve can move 1 in. from its mean position either up or down and the maximum steam supply is obtained when the speed falls 4 per cent. below the mean. Neglecting friction, find (a) the stiffness of the spring, and (b) the maximum speed of the governor.

4. Sketch an Allan straight link motion and find :—

- (a) the ratio between the arms of the weigh bar shaft in order that the lead may remain constant for all settings of the gear, and
- (b) the length and angular advance of the equivalent eccentric.

5. With reference to toothed wheels define :—

Arc of approach, arc of recess, path of contact, and diametral pitch.

A pair of wheels have 25 and 130 cycloidal teeth respectively. Find the addendum of each wheel, that the arcs of approach and recess may each be equal to the pitch, the flanks being radial. Prove any formula you may use.

**SECOND HALF**

1. What kind of a device is presupposed when energy is delivered to a machine at a variable rate and work done at a constant rate, the angular velocity remaining practically constant?

Give examples.

Is the amount of energy to be delivered in a given time always sufficient data upon which to base the design of a machine or to fix the driving device? Discuss, with examples.

2. A hoisting drum is mounted between and fastened to two gears, each gear meshing with a driving pinion. The drum is supported by two bearings as is also the pinion or drive shaft. The pinion shaft forms the crankshaft for the two simple hoisting engines that operate it, one at each end.

The efficiency of the gears alone is 0.96, of each bearing 0.96, of the rope sheaves and pulleys 0.80, and the mechanical efficiency of each engine is 0.80.

A weight of 30 tons is to be hoisted at the rate of 4 feet per minute. Find the H.P. of each engine and the efficiency of the hoist.

3. A four-link kinematic chain comprises two turning pairs, one oscillating pair and one sliding pair. Sketch the mechanism. What are the various ways in which the movement of the mechanism can be varied by inversion of the chain? Mention a practical application of each inversion.

Give a few instances of the use of the pantograph in practical mechanism.

4. What are the conditions for the correct steering of motor cars? Describe any form of steering gear which ensures correct steering.

Explain the effect on the distribution of pressure on the wheels of a car of the precession of a flywheel with a horizontal axis. Assume (1) axis parallel to back axle, (2) axis at right angles to this position.

5. In a four cylinder petrol engine the cranks 1 and 4 are in phase and are 180 degrees ahead of cranks 2 and 3 (numbered from the front). Radius of cranks 2 inches. Length of connecting rods four times radius of cranks. Wt. of reciprocating masses for each cylinder 2 lb. Revs. per minute 1,500. Find the resultant unbalanced forces and couples when cranks 1 and 4 are at 30 degrees to the top dead centre.

## HEAT ENGINES

Examiners—{ Mr. J. RIFFKIN, B.Sc. (GLAS.), DIP.R.T.C.,  
A.M.I.MECH.E., R.F.R.ECONS.  
,, R. WOLFENDEN, M.B.E., M.Sc.

*The questions are of equal value*

*Attempt THREE questions only from EACH half*

*Steam tables and  $H\phi$  charts for steam and  $CO_2$  may be used*

### FIRST HALF

1. Steam initially dry is expanded in a turbine from 180 lb./in<sup>2</sup> abs. to 2 lb./in<sup>2</sup> abs. At two points, where the pressures are 150 and 40 lb./in<sup>2</sup> abs. and the corresponding qualities are 0.985 and 0.937, sufficient steam is extracted to heat the feed to the saturation temperature corresponding to the extraction pressure. The quality of the steam at the exhaust pressure is 0.850. The condensate of the first heater is drained to the heater below, and the total condensate is finally cascaded to the condenser. Find the thermal efficiency of the turbine and compare it with the efficiency of a Carnot engine working between the same temperature limits.

2. A power unit in a steam plant consists of a single cylinder turbine receiving steam at 400 lb./in<sup>2</sup> abs. with 100°C. superheat and exhausting at 1 lb./in<sup>2</sup> abs. Its internal efficiency ratio is 0.64. This unit is to be replaced by a two-cylinder turbine installation operating between the same initial and final pressures. A reheater is to be provided which will reheat the steam from the H.P. turbine exhaust and supply it to the L.P. turbine at 40 lb./in<sup>2</sup> abs. and 270°C. Assume that each turbine of this set has an efficiency ratio of 0.64. Estimate the improvement in thermal efficiency due to the introduction of the two-cylinder plant.

3. Explain what is meant by the supersaturated expansion of steam, and give some idea of the limits within which this condition is possible.

Steam is expanded in a group of nozzles from 80 lb./in<sup>2</sup> abs. and 10°C. superheat to 45 lb./in<sup>2</sup> abs. Determine the required exit area for isentropic supersaturated flow of 5 lb./sec.

Assume for supersaturated steam the approximate Callendar equations :—

$$V = \frac{2.2436}{p} (H - 464); \frac{P}{T^{1.2}/s} = C; \text{ and } PV^{1.2} = C.$$

4. Explain why the Rankine cycle rather than the Carnot cycle is adopted as the standard with which to compare the performance of steam engines in practice.

Steam at 200 lb./in.<sup>2</sup> abs. and superheated 60°C. is supplied to an engine. If the condenser pressure is 3 lb./in.<sup>2</sup> abs., calculate the Rankine efficiency of the engine and selecting your own values for the boiler efficiency, the mechanical efficiency, and the efficiency ratio, estimate the probable overall efficiency of the plant from fuel to brake.

5. A CO compression refrigerator works between pressure limits of 400 lb./in.<sup>2</sup> abs. and 900 lb./in.<sup>2</sup> abs. The liquid is undercooled to 20°C. before the expansion valve, and the vapour is 10 per cent. wet at the beginning of compression. The horse-power required to drive the machine is 50.

Find the quality just after the expansion valve, the ideal coefficient of performance, and the capacity of the machine in tons of ice per day of 24 hours, from water at 15°C., if the actual coefficient of performance is 55 per cent. of the ideal.

Latent heat of fusion of ice is 79 C.H.U./lb. and one horse-power is 23.6 C.H.U./minute.

## SECOND HALF

1. What is the difference between the theoretical Otto and Diesel cycles? Which is theoretically the more efficient, assuming the same ratio of compression? Which is practically the more efficient?

Find an expression for the efficiency of an ideal engine working on the Diesel cycle, assuming air as the working substance and the specific heat constant.

2. In choosing a suitable fluid for use in a refrigerator state the effect of the following on the general efficiency of the plant :—

Latent heat.

Specific heat.

Specific volume.

Relation between pressure and temperature.

Give briefly the advantages and disadvantages of ammonia and carbon dioxide as working fluids in a refrigerator. Make a sketch of a temperature entropy diagram for ammonia, and show on it the refrigerating cycle for wet compression. How is the coefficient of performance obtained?

3. Show that in a compound air compressor working between extreme pressures of  $p$  and  $p_2$  the work done in each cylinder is the same if the intermediate pressure is

$$\sqrt{p_1 p_2}.$$

An air compressor takes 1,500 cubic feet of air per minute at 15 lb. per sq. inch absolute pressure and delivers the air at a pressure of 60 lb. per sq. inch absolute. The law of compression is  $pv^{1.2} = C$ . Find the horse-power required.

4. It is found that the expansion curve in a gas engine diagram is frequently above the adiabatic notwithstanding the rejection of heat to the cooling water during the expansion. Discuss the different theories which have been advanced to explain this. In a gas engine the temperature at a point in the expansion stroke was found to be 1,105 degrees centigrade.

Pressure 85 lb. per sq. inch.

Volume 358 cubic inches.

Find the temperature at a point where the pressure is 350 lb. per sq. inch and the volume 131 cub. inches.

5. Describe, with sketches, two methods of governing an oil engine of the Diesel type but having mechanical injection of fuel.

## HYDRAULICS AND HYDRAULIC MACHINERY

Examiners— { MR. P. C. GANGULI, B.Sc. (GLAS.).  
                  { „ E. A. MOORE.

*The questions are of equal value*

### FIRST HALF

NOTE.—Answer THREE questions only

1. A dock entrance is closed by a caisson, the depth of water being 24 ft. over the level floor. The width of entrance is 40 ft. at the floor and 48 ft. at the water level, the side walls having a straight batter. Find the total horizontal force due to water pressure upon the caisson.

Find also the depth of the centre of pressure.

2. A canal with a bottom width of 30 ft. and side slopes 2 to 1 flows full of water to a depth of 7 ft. Calculate the velocity of flow and the discharge in cusecs, the slope being 1 in 5,000.

Take  $C$  in the Chezy formula = 100.

3. A lock is 110 ft. long and 20 ft. wide. The difference between the water levels in the upper and lower reaches is 8 ft. The water in the lock is at the same level as that in the lower reach.

Find the area of sluices necessary in order that a boat may pass from the upper to the lower reach in 30 minutes.

$Cd = 0.60$ .

4. A conical pipe, varying in diameter from 4 ft. 3 ins. to 2 ft. 0 in., forms part of a horizontal water main. The pressure head at the large end is 100 ft., and at the small end 96.5 ft.

Determine the discharge through the pipe in gallons per minute.

5. Two reservoirs,  $1\frac{1}{2}$  miles apart, are connected by a straight pipe line consisting of one mile of 10 inch pipe, which branches into two parallel pipes each half a mile long, and of diameters 10 inches and 8 inches respectively.

The difference between the water levels of the two reservoirs is 50 ft.

Find the flow in cusecs through each pipe.

$f = 0.008$ .

### SECOND HALF

*Not more than THREE questions are to be attempted*

1. Two pipes  $AB$  and  $AC$  branch from a junction box,  $A$ , in which the head is kept constant.  $AB$ , 1 ft. in diameter and 6,000 ft. long, discharges at  $B$ , 50 ft. lower, under a pressure head of 25 feet;  $AC$ , 2 ft. in diameter and 8,000 ft. long, discharges at  $C$ , 75 ft. below  $A$ , under a head of 50 ft. Estimate the discharges.

If  $B$  and  $C$  are connected by a pipe 9 ins. in diameter and 2,500 ft. long, estimate the delivery at  $B$  and the pressure head there, if the quantity delivered at  $C$  remains constant but the delivery head is reduced by 5 ft. Neglect all losses except that due to friction and take  $f = 0.008$  for all pipes.

2. Define : viscosity, coefficient of viscosity, and kinematic viscosity.

Establish a formula for the flow of a viscous fluid, through a circular pipe.

A brake cylinder, 4 ins. diameter, is filled with oil of kinematic viscosity  $\cdot 0032$  ft. lb. units. It is fitted with a piston which, when subjected to a pull, forces oil from one side to the other through an external pipe  $\frac{1}{2}$  in. diameter and 2 ft. long. Neglecting leakage and other losses, determine the rate of movement of the piston when the force acting upon it sets up a pressure difference of 50 lb. per sq. inch.

3. State and explain the conditions which must be satisfied in order that two flows may be dynamically similar.

Define : corresponding speed.

Apply the principle of dimensional homogeneity to obtain an expression for the torque due to disc friction of a wheel of diameter  $D$  rotating at  $N$  revs. per min. in a fluid of viscosity  $\mu$  and density  $\rho$  on the assumption that these are the only factors on which the torque depends.

4. A single acting reciprocating pump 6 ins. diameter and 6 ins. stroke runs at 90 R.P.M. with a 3 per cent. slip. The delivery pipe is 3 ins. diameter and 200 feet long and it rises vertically from the pump through a height of 10 feet, remains horizontal at this level, and discharges into a tank 10 feet below the surface of the water in the tank. The pipe is fitted with an air vessel close to the pump. Calculate if the pump could be run at the above speed without an air vessel, and estimate the speed at which separation will take place.  $f = 0\cdot008$  and assume simple harmonic motion.

5. Find the dimensions of a trapezoidal earth channel of the most economical section to convey 800 cubic feet per sec. with a fall of 2 feet per mile and side slopes  $1\frac{1}{2}$  to 1.

Take  $v = 90 \sqrt{mi}$ . Prove any formula you may use.

## MACHINE AND ENGINE DESIGN

(MECHANICAL ENGINEERING)

Examiners— $\left\{ \begin{array}{l} \text{MR. C. R. COPELAND, A.M.I.E.,} \\ \text{A.M.I.MECH.E.} \\ \text{,, N. FLAT, DY. C.M.E.} \end{array} \right.$

*The figures in the margin indicate full marks*

- NOTES.—(1) *The First Half must first be attempted, and then ANY TWO questions from the Second Half.*
- (2) *The maximum time allowed for the First Half is 2 hours. At the end of that time the drawings will be collected.*
- (3) *The sketches accompanying the solutions to the Second Half must be free-hand sketches, drawn approximately to scale, and properly dimensioned.*

### FIRST HALF

The accompanying figure shows the pump drive from the cross-head of a small Marine Engine by means of rocking levers and links, the maximum loads on the various pump rods and plungers during the 'up' and 'down' strokes of the pumps are also given. 100

(a) Calculate the required thickness 't' of rocking lever at the section indicated. The following are the strength moduli for rectangular sections :—

$$Z = \frac{tb^3}{6} \text{ and } Zp = \frac{2}{9} tb^3$$

(b) Calculate also the diameter 'd' of the pump link bolts, so that each of the two bolts are capable of carrying the full link load. Design and make detail drawings of the following to a suitable scale :—

(c) The pump crosshead or cross-bar.

(d) The bottom set of phosphor bronze pump link bushes.

The following allowable working stresses may be used :—

Tensile stress in Phosphor Bronze	...	4,250 lbs./in. <sup>2</sup>
Tensile stress in M.S.	...	5,000 lbs./in. <sup>2</sup>
Tensile stress in M.S. link bolts	...	4,500 lbs./in. <sup>2</sup>
Bearing pressure	...	440 lbs./in. <sup>2</sup>

Table to B.S.W. sizes :—

Screw dia. "d"	...	$\frac{1}{8}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "	1"	1 $\frac{1}{8}$ "	1 $\frac{1}{2}$ "
Core area	...	·204	·304	·422	·554	·697	·894

## SECOND HALF

1. A flat tie-bar  $\frac{7}{8}$ " thick has fractured and the ends are to be joined by a riveted joint employing rivets  $1\frac{1}{8}$ " diameter. The load to be carried is 80 tons and the stresses must not exceed the following :— 50

Tensile	...	5 tons per sq. inch
Shear	...	4 " "
Bearing	...	7 " "

Design the joint and give sufficient details in dimensioned freehand sketches, approximately to scale, to enable it to be manufactured.

2. Figure 1 shows a diagram of a Breakdown Crane which has a maximum lifting capacity of 40 tons at 25 feet radius. It is provided with arms which can be swung out at right angles to the track and propped to prevent overturning when slewing. The centre-lines of these arms are shown at A.A. in the side and end elevations. Figure 2 shows a sketch of one of these arms and a portion of the underframe where they are carried. The weight of the crab, boiler, balance-weights, and underframe is equivalent to a weight of 90 tons through the central axis of the crane. The vertical and horizontal components of the forces at the points X and Y when the crane is lifting its maximum load are :— 50

		' X '	' Y '
Horizontal	...	25·0 tons	22·5 tons.
Vertical	...	42·5 "	20·0 "

Determine the reaction at the centre-lines of the propping arms when the crane is carrying its maximum load at right angles to the track and design the end 'W' of these propping arms and their fixings to the main frame. Free-hand dimensioned sketches must be given; the class of material to be used should be stated and the permissible stresses clearly laid down.

3. Figure 3 shows an incomplete sectional sketch of a pressure retaining or back-pressure valve in a water main passing 37,000 gallons per hour against a head of 300 feet. Determine :— 50

(a) The diameter and lift of the valve.

(b) The dimensions a, b, c, and t of the main casting and make

free-hand dimensioned sketches to shew—

- (i) The valve in position with means for guiding and checking its lift, and
- (ii) The fixings for the cover plate and type of joint.

State clearly the materials from which the various parts are made, the permissible stresses in them, and the assumed velocity of the water in the main.

4. Figure 4 shews a part sketch of the big-end of a connecting rod for an inside cylinder locomotive, of which the working pressure of the boiler is 180 lbs./sq. inch and the cylinder diameter is 2 feet 2 inches. If the diameter of the crank-pin be  $8\frac{1}{2}$ ", determine the length of the pin. Calculate also the main dimensions of the strap, the bolts, and the cotter, and make free-hand dimensioned sketches roughly to scale. State clearly the class of material to be used, the working stresses, and the bearing pressures allowed. 50

## STRENGTH AND ELASTICITY OF MATERIALS

(MECHANICAL ENGINEERING)

Examiners— $\left\{ \begin{array}{l} \text{MR. J. RIFFKIN, B.Sc. (GLAS.), DIP.R.T.C.,} \\ \text{A.M.I.MECH.E., F.R.ECON.S.} \\ \text{,, G P. CHESTNEY.} \end{array} \right.$

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

### FIRST HALF

1. Establish an expression for the mean intensity of shearing stress at any point in the cross section of a beam, when the beam is subjected to simple bending.

A horizontal cantilever of uniform section carries a load at the end. The section is circular hollow, of small wall thickness. Show that the deflection at the end due to shear is 50% greater than it would be if the shear stress were uniformly distributed.

2. To secure torsional stiffness in a shaft transmitting power, the greatest angle of torsion allowed is, in many cases,  $1^\circ$  for a length of 20 diameters. Prove that for a shaft for which  $G = 12 \times 10^6$  lb. / in.<sup>2</sup> this corresponds to an allowable torsional shear stress of 5,236 lb. / in.<sup>2</sup>.

A hollow shaft, with outer diameter twice the inner, is to transmit 10,000 H.P. at 150 R.P.M. Find the diameters to satisfy the above conditions, and also find the strain energy stored in 100 ft. of this shaft.

3. For an open-coiled helical spring of any section derive the relation between deflection and axial load.

The equal lengths of wire  $\frac{1}{2}$  inch in diameter are cut from the same sample of material. The one is made into an open-coiled spring in which the inclination of the coils is  $20^\circ$ , and the other is made into a close-coiled spring of 50 coils. The mean diameter of both springs is 2 inches. Find the axial forces necessary to produce deflections of 1 inch.  $E = 30 \times 10^6$ ,  $G = 12 \times 10^6$  lb / in.<sup>2</sup>

4. Deduce Lamé's formula for thick cylinders.

Determine the internal pressure which will produce a maximum hoop stress of 4,000 lb. / in.<sup>2</sup> in a hydraulic main of 5 inches internal diameter



with walls  $1\frac{1}{2}$  inch thick. Assume the main to be free from longitudinal stress and find the maximum shear stress.

5. Show that the work done in bending a simply supported, uniformly loaded rectangular bar within the elastic limit is  $\frac{4}{45} \cdot \frac{f^2}{E} \cdot V$ , where

$f$  is the maximum fibre stress,

$V$  is the volume of the bar,

$E$  is the modulus of elasticity.

Compare this with the work done in—

(a) stretching a tie bar of constant section and volume '  $V$  ' to a stress '  $f$  '.

(b) twisting a solid circular shaft of volume '  $V$  ' to a maximum torsional shear stress '  $f$  '.

### SECOND HALF

1. Deduce relations between the Elastic Constants  $E$ ,  $N$ ,  $K$ , and  $m$ .

For a given material Young's Modulus is 6,000 tons per sq. inch. Find the Bulk modulus and the lateral contraction of a round bar 1 inch in diameter and 10 ft. long when stretched .01 inch.

2.  $p/y = M/I = E/R$  is the usual expression establishing the relation between the terms of the formula for simple bending. Construct a Torsion formula parallel in form to the bending formula given, using it to investigate the following Board of Trade formulae for simple safety valve springs.

$$(a) d = \sqrt[3]{\frac{SD}{C}}, \text{ where } d \equiv \text{diameter of wire,}$$

$S$  = load on spring,

$D$  = diam. of coil centre to centre,

$C$  = 8,000 for round, and 11,000 for square steel.

$$(b) K = \frac{SD^3N}{22d^4}, \text{ where } K = \text{the total compression in inches,}$$

$D$  = diam. of coil centre to centre,

$d$  = the size of wire in sixteenth,

$S$  = the total load on valve in lbs,

$N$  = the number of free coils,

$22$  = a constant for round steel.

3. A shaft transmits 5,000 horse-power at 60 revs. The maximum twisting moment exceeds the mean twisting moment by 10%. Find the maximum twisting moment in inch pounds. If the propeller weighs 12 tons and its centre is 30 inches from the end of the stern tube, find the bending moment and the total equivalent twisting moment on the shaft. Allowing a stress of 8,000 lbs. per sq. inch, what should be the diameter of the shaft?

4. A ferro-concrete floor is 8 inches thick, and carries a load of 200 lbs. per sq. foot over a span of 12 feet. What sectional area of steel reinforcement 2 inches from the lower surface is necessary per foot width of floor if the pressure in the concrete is to be limited to 600 lbs. per sq. inch? What would then be the working stress in the steel.

5. A cube of iron is in compression; the load is applied to one face on the centre line parallel to the sides in one direction, but is not at the centre of that line.

Show that, if it deviates by one-sixth the length of the side from the centre of the face to which it is applied there is no stress at the edge further from the load, and that at the near edge the intensity of compression is twice the average intensity.

## METALLURGY

Examiners— { MR. N. N. SEN, M.Sc. (CAL.), A.I.C., A.R.S.M.,  
(Lond.).  
,, S. N. RAY, B.Sc., B.MET.

*The questions are of equal value.*

Only THREE questions to be attempted from EACH half.

### FIRST HALF

1. Sketch a foundry cupola, indicating the functions of various zones, and state the changes in chemical composition, if any, that may occur during melting of pig iron in a cupola. Compare the advantages and disadvantages of a cupola with those of an air-furnace.

2. Give the composition and properties of the following steels :—

- (1) Plain carbon turning tool steel;
- (2) High-speed tool steel;
- (3) Alloy steel for permanent magnets;
- (4) Alloy steel for transformer cores;
- (5) Alloy steel for roller and ball bearings;
- (6) Alloy steel for crusher jaws;
- (7) Rustless steel;
- (8) Rail steel.

3. Explain the meaning of critical points  $Ac_1$ ,  $A_2$ ,  $A_{r3}$ ,  $2$ ,  $1$ , and  $A_{cm}$ , and state what micro-constituents you expect to find on examining the structure of the following :—

- (a) High silicon cast-iron slowly cooled from the liquid state.
- (b) Low silicon cast-iron quickly cooled from the liquid state.
- (c) 1·2 per cent. carbon steel quenched in water from 100°C.
- (d) 1·2 per cent. carbon steel quenched in oil from 1,000°C.
- (e) 1·2 per cent. carbon steel slowly cooled from 1,000°C.

4. Write an essay on antifriction alloys.

### SECOND HALF

5. State, in general, the requirements to be met in selecting a material for lining a furnace, and discuss these with regard to the lining of the different parts of a Blast Furnace.

6. Specify the conditions necessary for the removal of Phosphorus and Sulphur in basic Electric Furnace practice.

7. Explain the terms 'Hot working' and 'Cold working' of steel. How is the structure of the original ingot metal changed by 'Hot working,' and how does the result depend on the temperature?

8. Describe briefly the preparation of moulding sands for (a) steel castings, and (b) iron castings, and discuss their characteristics.

## THEORY OF STRUCTURES

### (MECHANICAL ENGINEERING)

Examiners— { MR. PULINBIHARI GHOSH, B.Sc., B.E., A.M.I.E.  
Khan Bahadur TEFFAZZUL AHMED, B.E.

*The questions are of equal value*

### FIRST HALF

N.B.—Answer ANY FOUR questions from the First Half

1. State the Theorem of Three Moments in the forms in which it is commonly used.

A beam 20 ft. span is built-in at one end and is freely supported at the other end. Draw to scale the Bending Moment and Shear Force diagrams for a uniform load of 1 ton per foot run over the entire length of the beam.

2. A reinforced concrete beam 20 ft. span, 16 inches deep, and 10 inches broad, is reinforced with three  $\frac{3}{4}$  inch diameter rods placed with their centres 1 inch from the bottom. It carries two equal concentrated loads symmetrically placed on the span, 9 feet apart. Find the maximum values of the loads, taking into account the weight of the beam itself. Find, also, the stress developed in the steel.

Weight of concrete = 144 lb./c.ft.

$c = 650$  lb./sq. inch.

$m = 12$ .

3. State the general conditions of stability of masonry structures.

A retaining wall 25 feet high and 4 feet wide at the top retains earth whose weight is 1 cwt. per cubic foot and angle of repose 30 degrees. The earth face is vertical and its surface at the top is horizontal with the top of the wall. Work out the minimum width of the base so that there may not be any tension developed in the masonry. Draw a scaled diagram, showing the distribution of stress across the base of the wall.

Weight of masonry =  $1\frac{1}{4}$  cwt. per cubic foot.

4. A symmetrical parabolic arched rib has a span of 40 feet and a rise of 8 feet, and is hinged at the springings and crown. It carries a load of 10 tons at quarter span measured horizontally from the left hand support. Find the reactions at the supports, the normal thrust, and the radial shearing force at the point of application of the load. Draw the Bending Moment diagram for the arch and find the maximum bending moments, positive and negative, and the points at which they act.

5. A reinforced concrete continuous slab of two equal spans each 10 feet, is simply supported at the two ends and is continuous over an intermediate support, all the supports being at the same level. It carries a super-imposed load of 1 cwt. per square foot. Minimum cover for the reinforcements is  $\frac{1}{2}$  inch. Design the slab. Give two sections of the slab at right angles to each other, showing the arrangement of reinforcements over the supports and other places clearly.

Take  $c = 600$  lb. per sq. inch;

$t = 16,000$  lb. per sq. inch;

$m = 12$ .

### SECOND HALF

*Only THREE questions are to be answered*

1. A beam 'l' feet long is freely supported at its two ends A and B, and supports an uniformly decreasing distributed load which is W tons per foot at A and zero at B. Draw the Bending Moment and Shear Force diagrams, neglecting the weight of the beam itself. If  $l = 15$  feet and  $W = 3$  tons, find the Maximum Bending Moment and its point of occurrence.

2. Define 'Long columns' and 'Short columns.' Show why the formula for 'short columns' is not applicable to 'long columns'. Give a formula which is applicable to both long and short columns. A box section C.I. column 15 feet long is fixed at its lower end and carries a load at its

free upper end. Calculate the load the column will safely carry, the outside dimensions of the section being 8 inches by 10 inches and the metal being 1 inch thick. (Safe compressive stress for cast iron may be taken at 7 tons per square inch.)

3. The truss shown in Fig. 1 fixed at *A* and free at *B* weighs 1,200 lbs. and is spaced 10 feet apart. It is subjected to a wind pressure of 40 lbs. per square foot (horizontal). Find the maximum and minimum stresses in the member *CD*.

4. A moving uniform load longer than the span and of intensity two tons per ft. run crosses a bridge of span *l* from left to right. Draw the diagram for maximum bending moment.

5. Find the Moment of Inertia and the radius of gyration of the section as per Fig. 2 about the axis *xx*, which is parallel to the base and passes through the centre of gravity of the section. The corners may be considered square.

## STRUCTURAL DESIGN

(MECHANICAL ENGINEERING)

Examiners—{ Mr. T. A. GARLAND, B.Sc., A.M.I.E.,  
A.M.I.C.E.  
,, STEPHEN GOLLEDGE.

*The questions are of equal value*

### FIRST HALF

*Answer either A or B*

A. A steel stanchion with a square base carries an axial load of 100 tons. Design a suitable reinforced concrete footing with a square base for this stanchion.

Data :—

Safe bearing pressure on concrete	... 500 lbs. per sq. inch.
Safe bearing pressure on soil	... 1 ton per sq. foot.
Weight of concrete	... 150 lbs. per cub. foot.
Maximum stress in concrete	... 500 lbs. per sq. inch.
Maximum stress in steel	... 18,000 lbs. per sq. ,,

$$m=15.$$

Make a drawing to a scale of 1 inch to 1 foot, showing how the reinforced is arranged, paying special attention to the shear reinforcement.

B. Design a brick retaining wall complete with a concrete foundation to suit the data given below. Make a dimensioned drawing of the section of the wall to a scale of  $1\frac{1}{2}$  feet to 1 inch and show how you would provide for drainage.

Weight of brickwork	... 100 lbs. per cub. ft.
Safe compressive stress	... 60 lbs. per sq. inch.
Coefficient of friction for damp mortar	... 0.7
Weight of earth	... 110 lbs. per cub. ft.
Angle of repose	... 37 degrees.

Pressure on foundation not to exceed 1 ton per. sq. ft.

Height of wall above ground level, 18 feet.

Wall to sustain a horizontal bank level with the top.

Top of wall two bricks thick.

Batter ... 1/12.

## SECOND HALF

Answer either A or B

Candidates may use Dorman Long's Section Handbook and Slide Rules.

A. A through road bridge over a railway consisting of two spans of plate girders each 40' 0", carrying troughing, etc., is supported on steel trestles at A, B and C, Fig.1. Owing to a re-arrangement of the track passing beneath the bridge it is found necessary to move trestle B to position B'. No records are available of the permissible loading on the bridge, although particulars of the cross section of the girders has been obtained, *vide* Fig. 2. Assuming that a suitable pin joint connection will be made between the girders at point D, design suitable stiffening members for girder 'a'.

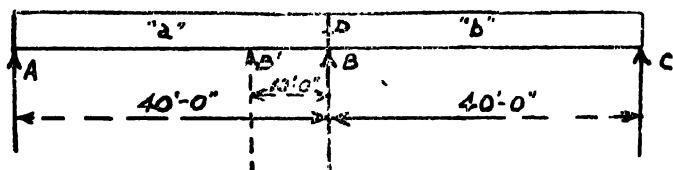


FIG. 1.

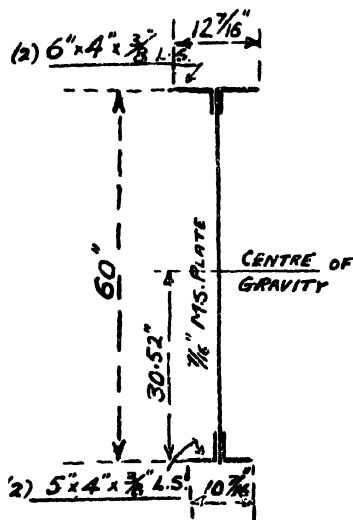


FIG 2.

It will be necessary first to determine the equivalent dead load on each girder.

Maximum stresses in flanges	6.5 tons per sq. in.
Maximum stress in web (shear)	5    "    "    "
Maximum stress in rivets (shear)	5    "    "    "
Maximum Bearing value of Rivets	10    "    "    "
All Rivets $\frac{3}{4}$ " diameter.	

Answer should be arranged as follows :—

- Moment of Inertia of Girder.
- Permissible loading per foot run of girder.
- Give a sketch at a scale of 1" to 1 foot shewing strengthening members required over trestle 'B'.
- Reaction at A after trestle has been moved to its new position.

B. A pressed steel water tank 12' 0" square by 8' 0" high is carried on a steel staging 10' 0" square. The height from underside of tank to ground is 40' 0" (see Fig. 3).

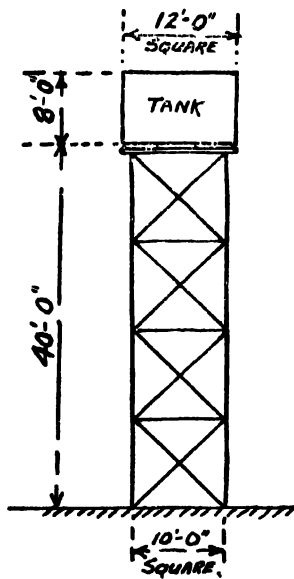


FIG. 3.

Prepare a suitable design for—

1. Floor girders to support the tank,
2. Staging,

3. Foundations, and assume the following data is given :—

- |   |                         |
|---|-------------------------|
| (a) Gross weight of tank when full  | 36 tons.                |
| (b) Wind load, which can be assumed to be concentrated on one face of tank only     | 1.25 tons.              |
| (c) Permissible stress in tension and compression members                           | ... 8 tons per sq. in.  |
| (d) Shear Stress in Bolts   | ... 5 tons per sq. in.  |
| (e) Bearing value in Bolts  | ... 10 tons per sq. in. |
| (f) Max. load on concrete   | ... 8 tons per sq. ft.  |
| (g) Max. load on ground   | ... 1 ton per sq. ft.   |
| (h) Diagonal members of staging only take tension.                                  |                         |
| (i) Ratio of length of struts to least radius of gyration shall not exceed 150 : 1. |                         |
| (j) As far as possible $\frac{5}{8}$ " dia. bolts and nuts to be used throughout.   |                         |

*Note.*—Sketches shewing details of principal connections should be given, using a scale of not less than 1" to 1 foot.

All calculations and stress diagrams should be given with the answer.

## WORKS MANAGEMENT AND ACCOUNTS

(MECHANICAL ENGINEERING)

Examiners— { Mr. G. BASU.  
                  { „ W. GOW.

### FIRST HALF

*The figures in the margin indicate full marks*

N.B.—THREE questions only are to be answered from this half. Question No. 1 is compulsory.

1. Illustrate fully by means of a diagram your ideas of the administrative organization necessary for the efficient working of a large, modern, engineering concern. 50

N.B.—You are to deal very fully with this question, supplementing your diagram, if necessary, with written notes so that your ideas will be quite clear to the examiner.

2. What system of distribution of ' factory overhead ' is in your opinion, the most equitable in a machine shop where— 50

- (a) The machine is more important than the operator;
- (b) The skill of the operator is the more important consideration ?

3. In times of industrial depression is there any justification for selling your products at under factory cost? Discuss this fully. 50

4. In the Pattern Shop of a factory engaged in engineering work covering a wide range, the practice of a carefully registering and indexing the patterns has fallen into disuse. The effect on the monthly bills for material and labour is disastrous, and you are called in, as an expert, to remedy the existing state of affairs and particularly, to devise a suitable indexing and registering system for the shop. Submit a report dealing minutely with the indexing system recommended. 50

5. Criticize the arrangement in a factory whereby the purchase of all stores and materials for the productive departments is entrusted to the department normally functioning as the Sales Department. 50

6. What is meant by the term 'melting ratio' as applied to cupola practice? Say how this ratio is affected by (a) a long run; (b) a short run; (c) the choice of a large or small cupola for melting small quantities. 50

## SECOND HALF

*Attempt THREE questions only.*

*The questions are of equal value.*

1. Prepare a Manufacturing Account for the half-year ended 31st March, 1933 :—

	Rs.	A.	P.
Stock of materials on 1st October, 1932	31,005	6	6
Stock of materials on 31st March, 1933	23,906	2	9
Purchase of materials	83,145	4	6
Material returned	1,872	1	3
Wages	39,614	5	6
Manufacturing expenses	9,010	0	0
Work-in-progress at start	11,610	5	0
Work-in-progress at end	7,540	10	0

2. A firm of constructional engineers carry on a business which is almost entirely done under contracts. Most of the materials required is purchased specially for these contracts but quantities of general materials are also purchased for stock. They desire to be kept advised of the progress of the cost and the ultimate profit or loss on each contract as completed. State the general outlines of a system you would recommend for this purpose.

3. Sometimes provision is made for depreciation of plant by writing off a fixed proportion of the original cost in each year, and sometimes by writing off in each year a fixed percentage of the balance of the account as it stood at the commencement of that year. Supposing that it is desired to write plant which cost Rs. 15,000 down to Rs. 9,000 at the end of the fourth year, state the amount that would be charged against each year's profits under each of these two systems.

4. (a) What is *Idle* time, and how is it accounted for for costing purposes ?

(b) The Engineer-in-charge of Job No. 17A reports that on that job there is surplus material valued, at cost, at Rs. 1,318. This cannot be used on the job. State how you will deal with this item in relation to Job No. 17A.









